

#14
UNIVERSITY OF MINNESOTA BULLETIN

JANUARY 2, 1944

extension classes

TWIN CITIES



Questions most often asked about Extension Classes:

Most answers to questions about Extension Classes are found in this Bulletin.

1. How do I register? What hours can I register? (see pp. 35-38 and 9-19)
2. Can I earn a degree entirely through Extension? Which ones? (see pp. 55-95)
3. I have been attending college elsewhere. How can I continue my educational program through Extension? (see p. 54)
4. When does registration for classes begin? End? (see pp. 9-19)
5. How do I get the credits I've earned in Extension entered on my college transcript? (see p. 49)
6. What do I have to do to use my G.I. benefits to take Extension Classes? (see p. 50)
7. Are there admission requirements for Extension Classes? (see p. 28)
8. Are there ways to get credits without attending class? (see pp. 45-47)
9. Can I get any financial assistance to take Extension Classes? (see p. 48)
10. What is the difference between certificate and degree credit? (see p. 45)

More questions?

373-3195

Call Extension Classes

editor: Joan Halgren

editorial assistant: Marie Ward

art: departments of Communication Services and Graphic Design

**Extension Classes Information and
Registration Offices open Monday-
Thursday, 7:45 a.m. to 8 p.m., and
Friday from 7:45 a.m. to 4:30 p.m.
(see office hours, page 21)**

general information

373-3195

counseling and program advising

373-3905



**continuing education and extension
university of minnesota**

11 WAYS to

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 Register for an Extension class. Select from over 1,000 different courses, offered at four convenient locations in the metropolitan area—one near you! See page 22.
- 2 If you find it difficult to attend classes you may earn credits by taking University correspondence courses, in which you work at your own speed. See page 47.
- 3 U of M credit is available for several radio and television courses. See pages 47 and 166.
- 4 The Department of Women's Programs offers daytime liberal arts seminars and courses both on and off-campus for credit. (Men are welcome in the classes too!) See page 173.
- 5 Earn credit by examination. You may receive credits by taking examinations for credit in fields in which you have gained knowledge outside the classroom. See page 45.
- 6 You may earn credits by taking the College Level Examination Program (CLEP) examinations offered by the College Entrance Examination Board. See page 47.
- 7 You may register for "independent study"—a Y registration—and earn credits without attending class. Courses available under a Y registration are not limited to those listed in the Extension Classes Bulletin. See page 45.
- 8 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 46.
- 9 You may earn up to 15 credits for an independent project by registering for University College 3075. See page 47.
- 10 Receive up to 45 "blanket" credits toward a General College degree for technical courses taken and completed at approved institutions. See page 59.
- 11 Earn credit by designing directed study and/or research projects around your job activities, involvement in the community, or similar experiences according to your own time schedule. For additional information call 373-3919. See page 46.



credits

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The idea that our major public universities have a clear responsibility to serve large numbers of people with diverse educational backgrounds and goals is not new. It has been at the heart of American public higher education for almost a century.

But while the University of Minnesota has long had the good fortune of providing educational services to hundreds of thousands of persons, we have only begun to see and appreciate the true potential in the area 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, a growing number of Americans will enroll in these programs in the years immediately before us. This is encouraging primarily because it is an educationally stimulating development both for our institutions and for our students.

I look forward to the continued growth of the University of Minnesota's continuing education and extension programs.

C. Peter Magrath
President, University of Minnesota

In a society which changes as rapidly as ours does, the citizen of the last third of this century must consider his education not just a pre-service once-for-all preparation, but a continuing series of activities to meet specific educational objectives.

The Department of Extension Classes provides opportunities for students to work with University faculty to achieve their objectives. We welcome you to the programs 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



Even old hands at taking Extension classes will find in the following pages a number and variety of opportunities which may be surprising—fifteen hundred courses (many new), different ways to learn, and various entertainment, social, athletic, and cultural activities. Whether 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. We can't be all things educationally to all people, but there is a good deal more of the University's vast educational resources that we can help offer if the demand is sufficient. Use the coupon (in the green pages), or 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 procedures or if you have a complaint.

I think 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 Elmer L. Andersen, St. Paul, Chairman; The Honorable Neil C. Sherburne, Lakeland, Vice Chairman; The Honorable Fred A. Cina, Aurora; The Honorable Lauris D. Krenik, Madison Lake; The Honorable L. J. Lee, Bagley; The Honorable Lester A. Malkerson, Minneapolis; The Honorable Wenda Moore (Mrs. Cornell), Minneapolis; The Honorable George W. Rauenhurst, Olivia; The Honorable Loanne R. Thrane (Mrs. Ralph), Chanhassen; The Honorable David C. Utz, M.D., Rochester; The Honorable Kathryn Vander Kooi (Mrs. Benjamin), Luverne; The Honorable John A. Yngve, Wayzata.

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Walter H. Bruning, Vice President for Administrative Operations
Paul H. Cashman, Vice President for Student Affairs
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CONTINUING EDUCATION AND EXTENSION

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Eleanor S. Fenton, associate dean for Continuing Education
George W. Bilicic, assistant dean for Community Relations and Extension Services
Gerald A. Klement, senior administrative officer

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John S. Malmberg, associate director
Beverly R. Sinniger, assistant director
David G. Ordos, program director
William R. VanEssendelft, program director
Richard G. Weeks, Jr., program director
Shirley Williams, office supervisor
Joan Halgren, editor

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Mari E. Forbush, program adviser
Bonnie L. Gray, counselor
James Hickman, Individual Learning
Opportunities Coordinator
John Kleinbaum, counselor
Susan Thornburg, counselor
Fran VanSlyke, tuition assistance

Extension Research

Clara Kanun, director

Instructional Systems Departments and Centers; Directors

Conferences, Alan Brown, director, 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 C. Young, 33 Wesbrook Hall
University Media Resources, Burton Paulu, 540 C Rarig Center
Duluth Continuing Education and Extension Center, James J. Kafka, 431 Administration
Building, Duluth Campus
Morris Continuing Education and Extension Center, Russell E. May, 226 Engineering
Building, Morris Campus
Rochester Continuing Education and Extension Center, Dean Swanson, acting director,
2120 East Center Street, Building 4, Rochester

Continuing Education Division; Directors

Continuing Education in the Arts, Dale D. Huffington, 320 Wesbrook Hall
Continuing Business Education, H. Merrell Arnold, 334 Business Administration
Continuing Education in Dentistry, Robert D. Jeronimus, 4 Owre Hall
Continuing Education in Education, Reynold Willie, 102 Burton 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 Legal Education, John B. Wirt, 338 Nolte Center for Continuing Education
Continuing Medical Education, Douglas Fenderson, 1350 Mayo Building
Continuing Pharmacy Education, Thomas M. McKennell, 109 Appleby Hall
Continuing Education in Social Work, William Hoffman, 321 Nolte Center for Continuing
Education

Community Relations and Extension Services Programs; Directors

Audio-Visual Library Services, Willard D. Phillipson, 3300 University Ave. S.E.
Civil Defense Education, Robert J. Elliott, 1633 Eustis Street, St. Paul
Community Programs, Carol L. Olson, 305 and 310 Wesbrook Hall
Delinquency Control Program, Richard J. Clendenen, 219 Temporary North of Mines
Fire-Service Information, Research, Education, Frank E. Oberg, 3300 University Ave. S.E.
Labor Education Service, John J. Flagler, 417 Business Administration
Continuing Education for Women, Edith Mucke, 200 Wesbrook Hall
Continuing Education in Public Policy, William C. Rogers, 306 Wesbrook Hall
Communication Services, Carol Flynn, 120 Shops Building

Human Rights

The University of Minnesota adheres to the principle that all persons shall have equal opportunity and access to facilities in any phase of University activity without regard to race, creed, color, sex, age or national origin. Under this principle, educational, cultural, social, housing, extracurricular and employment opportunities are available to all on an equal basis.

schedule of terms

Fall Quarter: September 23-December 12

Fall Semester: September 23-January 25

Winter Quarter: January 6-March 22

Spring Semester: February 10-June 14

Spring Quarter: April 1-June 14

Although classes vary in length of term, all credits are quarter credits.

Note: Extension classes are **rarely** canceled for any reason. However, in the event that Extension classes are to be canceled because of some emergency, the University of Minnesota radio station, KUOM (770 on the dial), will make such an announcement at 4 p.m. on the day in question. Announcements will be made on other stations also.

fall quarter

mail registration

Campus Office (101 Wesbrook Hall)

August 19, Monday, to August 21, Wednesday

Postcard requests for limited enrollment classes accepted by mail (see page 37).

August 22, Thursday, to August 23, Friday

Office will begin mailing limited class cards and registration forms to students whose requests are honored (see page 36).

August 26, Monday, to September 13, Friday

Registration accepted by mail for nonlimited enrollment classes. Mail registrations postmarked after midnight September 13 must include late fee (see late registration this page).

Procedures for mail registration appear on page 36.

in-person registration

Campus Office (101 Wesbrook Hall)

September 5, 9-13	12 noon to 8 p.m.
September 6	12 noon to 4:30 p.m. (Closed Saturday)

MacPhail Office (1128 LaSalle Ave.)

September 5, 13	12 noon to 8 p.m.
September 6	12 noon to 4:30 p.m.
September 9-12	12 noon to 6 p.m. (Closed Saturday)

St. Paul Registration-Information Booth (Skyway Building between 5th and 6th on Wabasha St.) for nonlimited classes.

September 5-13	9 a.m.-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 (see addresses, page 22). See also Minnetonka School District, page 22.

September 5-11	8:30 a.m. to 4 p.m.
September 12-13	8:30 a.m. to 8 p.m. (Closed Saturday)

SEPTEMBER 13, FRIDAY: The last day for registration and payment of tuition without a late fee.

late registration

Campus Office (101 Wesbrook Hall)

September 16-17	12 noon to 8 p.m.
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MacPhail Office (1128 LaSalle Ave.)

September 16-17	12 noon to 6 p.m.
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September 23: Late registration resumes by mail or in-person with \$5 late fee through the first week of classes (see office hours, page 21). For information regarding registration and late fees during or after the second week of classes, see page 31.

classes september 23 – december 12



other important dates

September 18-20

All offices closed to process registrations

September 23, Monday

Fall Quarter classes begin

October 28, Monday

Veteran's Day, holiday

November 1, Friday

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

November 28, 29, 30

Thanksgiving day holidays; all offices closed and all classes dismissed

December 6-12

Final examination period

December 12, Thursday

Last day of Fall Quarter

fall semester

mail registration

Campus Office (101 Wesbrook Hall)

August 19, Monday, to August 21, Wednesday

Postcard requests for limited enrollment classes accepted by mail (see page 37).

August 22, Thursday, to August 23, Friday

Office will begin mailing limited class cards and registration forms to students whose requests are honored (see page 36).

August 26, Monday, to September 13, Friday

Registration accepted by mail for nonlimited enrollment classes. Mail registrations postmarked after midnight September 13 must include late fee (see late registration this page).

Procedures for mail registration appear on page 36

in-person registration

Campus Office (101 Wesbrook Hall)

September 5, 9-13	12 noon to 8 p.m.
September 6	12 noon to 4:30 p.m. (Closed Saturday)

MacPhail Office (1128 LaSalle Ave.)

September 5, 13	12 noon to 8 p.m.
September 6	12 noon to 4:30 p.m.
September 9-12	12 noon to 6 p.m. (Closed Saturday)

St. Paul Registration-Information Booth (Skyway Building between 5th and 6th on Wabasha St.) for nonlimited classes.

September 5-13	9 a.m.-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 (see addresses, page 22).

September 5-11	8:30 a.m. to 4 p.m.
September 12-13	8:30 a.m. to 8 p.m. (Closed Saturday)

SEPTEMBER 13, FRIDAY: The last day for registration and payment of tuition without a late fee.

late registration

Campus Office (101 Wesbrook Hall)

September 16-17	12 noon to 8 p.m.
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MacPhail Office (1128 LaSalle Ave.)

September 16-17	12 noon to 6 p.m.
-----------------	-------------------

September 23: Late registration resumes by mail or in-person with \$5 late fee through the first week of classes (see office hours, page 21). For information regarding registration and late fees during or after the second week of classes, see page 31.

classes september 23 – january 25



other important dates

September 18-20

All offices closed to process registrations

September 23, Monday

Fall Semester classes begin

October 28, Monday

Veteran's Day, holiday

November 20, Wednesday

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

November 28, 29, 30

Thanksgiving Day holidays; all offices closed and all classes dismissed

December 13, Friday

Christmas recess begins; classes dismissed until January 3

December 24-25

Christmas holidays; all offices closed

December 29-January 3

All offices closed

January 6, Monday

Fall Semester classes resume

January 20-25

Final examination period

January 25, Saturday

Last day of Fall Semester

winter quarter

mail registration

Campus Office (101 Wesbrook Hall)

November 4, Monday, to November 6, Wednesday

Postcard requests for limited enrollment classes accepted by mail (see page 37).

November 7, Thursday, and November 8, Friday

Office will begin mailing limited class cards and registration forms to students whose requests are honored (see page 36).

November 25, Monday, to December 31, Tuesday

Registration accepted by mail for nonlimited enrollment classes. Mail registrations postmarked after midnight December 31 must include late fee (see late registration this page).

Procedures for mail registration appear on page 36

in-person registration

Campus Office (101 Wesbrook Hall)

December 4-5, 9-12	8 a.m. to 8 p.m.
December 6, 13	8 a.m. to 4:30 p.m. (Closed Saturday)

MacPhail Office (1128 LaSalle Ave.)

December 4-5	8:30 a.m. to 8 p.m.
December 6, 9-13	8:30 a.m. to 4:30 p.m. (Closed Saturday)

St. Paul Registration-Information Booth (Skyway Building between 5th and 6th on Wabasha St.) for nonlimited classes

December 4-13	9 a.m.-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 (see addresses, page 22). See also Minnetonka School District, page 22.

December 6, 9-10, 13	8 a.m. to 4 p.m.
December 11-12	8:30 a.m. to 8 p.m. (Closed Saturday)

DECEMBER 31, TUESDAY: The last day for registration and payment of tuition without a late fee.

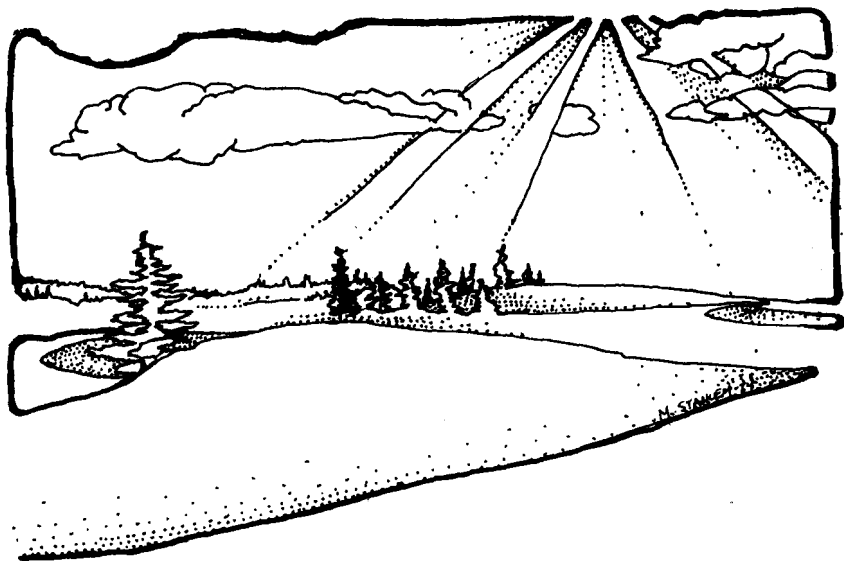
late registration (no late fee until January 1)

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

December 16-31: Late registration accepted with no late fee 8 a.m. to 4:30 p.m.

January 6: Late registration resumes by mail or in-person with \$5 late fee through the first week of classes (see office hours, page 21). For information regarding registration and late fees during or after the second week of classes, see page 31.

classes january 6 – march 22



other important dates

December 24-25

Christmas holidays; all offices closed

December 28—January 3

All offices closed to process registrations

January 6, Monday

Winter Quarter classes begin

February 6-7

All offices closed to process Spring Semester registrations

February 14, Friday

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

February 17, Monday

President's Day, holiday; all offices closed

March 17-22

Final examination period

March 22, Friday

Last day of Winter Quarter

spring semester

mail registration

Campus Office (101 Wesbrook Hall)

January 6, Monday to January 10, Friday

Postcard requests for limited enrollment classes accepted by mail (see page 37).

January 13, Monday

Office will begin mailing limited class cards and registration forms to students whose requests are honored (see page 36).

January 13, Monday, to February 5, Wednesday

Registration accepted by mail for nonlimited enrollment classes. Mail registrations postmarked after midnight February 5 must include late fee (see late registration this page).

Procedures for mail registration appear on page 36

in-person registration

Campus Office (101 Wesbrook Hall)

January 27-30	12 noon to 8 p.m.
January 31	12 noon to 4:30 p.m.
February 3-5	12 noon to 8 p.m. (Closed Saturday)

MacPhail Office (1128 LaSalle Ave.)

January 27-30	12 noon to 6 p.m.
January 31	12 noon to 4:30 p.m.
February 3-4	12 noon to 6 p.m.
February 5	12 noon to 8 p.m. (Closed Saturday)

St. Paul Registration-Information Booth (Skyway Building between 5th and 6th on Wabasha St.) for nonlimited classes.

January 27-February 5	9 a.m.-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 (see addresses, page 22).

January 27-February 5	8:30 a.m. to 4 p.m.
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FEBRUARY 5, WEDNESDAY: The last day for registration and payment of tuition without a late fee.

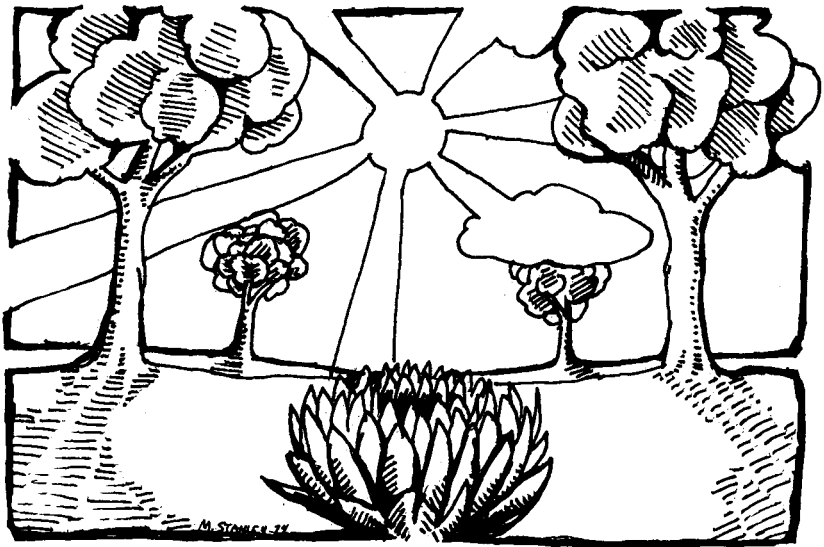
late registration

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

February 6-9: Late registration accepted with \$5 late fee by mail only. (All offices closed to process registration.)

February 10: Late registration resumes by mail or in-person with \$5 late fee through the first week of classes (see office hours, page 21). For information regarding registration and late fees during or after the second week of classes, see page 31.

classes february 10 – june 14



other important dates

February 6-7

All offices closed to process registrations

February 10, Monday

Spring Semester classes begin

February 17, Monday

President's Day, holiday; all offices closed

March 22, Saturday

Spring Semester recess begins; classes dismissed until April 1

March 27-28

All offices closed to process Spring Quarter registrations

April 1, Tuesday

Spring Semester classes resume

April 11, Friday

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

May 26, Monday

Memorial Day, holiday; all offices closed

June 9-14

Final examination period

June 14, Saturday

Last day of Spring Semester

spring quarter

mail registration

Campus Office (101 Wesbrook Hall)

February 24, Monday, to February 26, Wednesday

Postcard requests for limited enrollment classes accepted by mail (see page 37).

February 27, Thursday, to February 28, Friday

Office will begin mailing limited class cards and registration forms to students whose requests are honored (see page 36).

March 11, Tuesday

Last day for students to return limited class cards, registration forms, and tuition and fees for limited classes.

March 3, Monday, to March 26, Wednesday

Registration accepted by mail for nonlimited enrollment classes. Mail registrations postmarked after midnight March 26 must include late fee (see late registration this page).

Procedures for mail registration appear on page 36

in-person registration

Campus Office (101 Wesbrook Hall)

March 17-20, 24-26 8 a.m. to 8 p.m.
March 21 8 a.m. to 4:30 p.m.
(Closed Saturday)

MacPhail Office (1128 LaSalle Ave.)

March 17, 26 8:30 a.m. to 8 p.m.
March 18-20, 24-25 8:30 a.m. to 6 p.m.
March 21 8:30 a.m. to 4:30 p.m.
(Closed Saturday)

St. Paul Registration-Information Booth (Skyway Building between 5th and 6th on Wabasha St.) for nonlimited classes

March 17-26 9 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 (see addresses, page 22). See also Minnetonka High School, page 22.

March 17-21, 24 8:30 a.m. to 4 p.m.
March 25, 26 8:30 a.m. to 8 p.m.
(Closed Saturday)

MARCH 26, WEDNESDAY: The last day for registration and payment of tuition without a late fee.

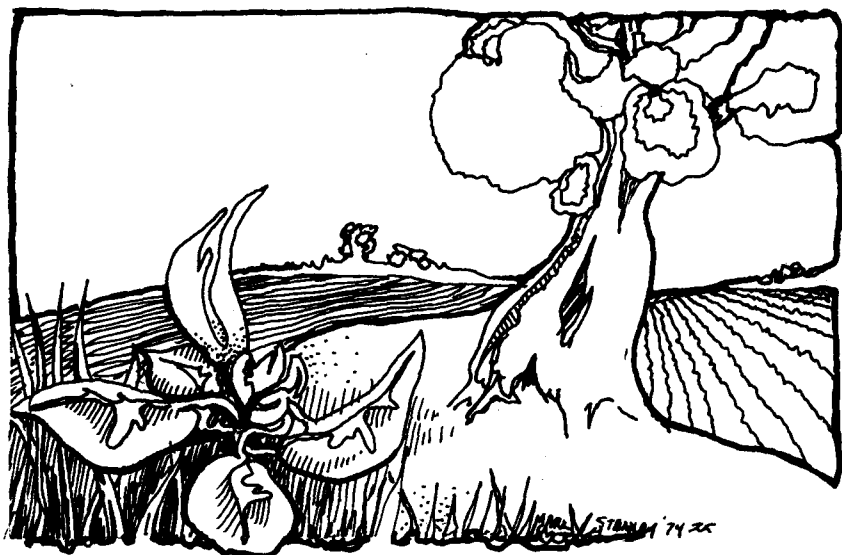
late registration

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

March 27-31: Late registration accepted with \$5 late fee by mail only. (All offices closed to process registration.)

April 1: Late registration resumes by mail or in person with \$5 late fee through first week of classes (see office hours, page 21). For information regarding registration and late fees during or after the second week of classes, see page 31.

classes april 1 – june 14



other important dates

March 27-28

All offices closed to process registrations

April 1, Tuesday

Spring Quarter classes begin

May 9, Friday

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

May 26, Monday

Memorial Day, holiday; all offices closed

June 9-14

Final examination period

June 14, Saturday

Last day of Spring Quarter



campus office

(minneapolis campus)

101 Wesbrook Hall, University of Minnesota
Minneapolis, Minnesota 55455 (373-3195).

office hours*

Monday through Thursday 7:45 a.m.-8 p.m.
Friday 7:45 a.m.-4:30 p.m.
Monday through Friday
June 16-27 7:45 a.m.-6 p.m.
June 30-Sept. 3, 1975 7:45 a.m.-4:30 p.m.
Saturday CLOSED

macphail office

(downtown minneapolis)

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

office hours

Monday through Friday 8:30 a.m.-5:15 p.m.
Saturday 8:30 a.m.-4:30 p.m.
Saturday (July, August) CLOSED

counseling department

(minneapolis campus)

314 Nolte Center (373-3905) See page 163.

office hours

Monday through Friday 8 a.m.-12 noon
1:00-4 p.m.
Evenings by appointment

* See Registration Hours, pages 9-19.

See maps showing locations of Twin Cities offices in back of bulletin.

**The offices below are open for registration during registration hours only.
See Registration Hours, pages 9-19.**

richfield district office:

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

Richfield District Office, Richfield Senior High School, 7001 Harriet Avenue, Minneapolis, Minnesota 55423 (861-7511).

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 (545-2571).

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 (474-5401). Minnetonka Senior High School, Highway 7, Excelsior, Minnesota 55331.

roseville district office:

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

Roseville District Office, 1251 West County Road B2, Roseville, Minnesota 55113 (636-0677).

Kellogg Senior High School, 15 East County Road B2, Roseville, Minnesota 55113.

out-state offices

duluth office:

James Kafka, Director, 431 Administration Building, University of Minnesota, Duluth, Minnesota 55812 (218-726-8113). Courses offered in Duluth are listed in separate bulletin which may be obtained from the Duluth Office.

morris office:

Russell E. May, Director, University of Minnesota, Morris, Minnesota 56268 (589-2482). Courses offered in Morris are listed in separate bulletin which may be obtained from the Morris Office.

rochester office:

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

The evening schedule listed on the next page has been established by University bookstores. Note that not all bookstores are open every night.

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 a student needs a book from the West Bank Bookstore but cannot come to campus until Saturday, he can call the West Bank Bookstore (which does not have Saturday hours), and ask to have the book sent to the Nicholson Bookstore, where he can pick it up Saturday morning. The same procedure applies to having books sent from the Nicholson and/or Engineering Bookstore to the West Bank Bookstore, for students who prefer to pick up their books on the West Bank.

If a Course is Canceled—Books for canceled courses 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.

Resale of Books—Students may sell books for courses scheduled in the following term. Books will be purchased by the bookstore at the beginning of the following term.

*** nicholson bookstore**

(The Nicholson Hall Bookstore sells books for courses in the Colleges of Liberal Arts—with the exception of Social Science, Political Science and History courses—Education, and General College.)

Telephone: 373-3688

special hours:

8:00 a.m.-7:30 p.m., Monday through Thursday, for the first week of Fall Quarter and Fall Semester.

8:00 a.m.-6:30 p.m., Monday through Thursday for the second week of Fall Quarter and Fall Semester.

8:00 a.m.-7:30 p.m., Monday through Thursday, for the first week of Winter and Spring Quarters and Spring Semester.

regular hours:

8:00 a.m.-4:30 p.m., Monday through Friday, fall through spring.*

10:00 a.m.-2:00 p.m., Saturday, fall through spring.*

*** main engineering bookstore**

(The Main Engineering Bookstore sells books for courses in the Institute of Technology.)

Telephone: 373-3244.

special hours:

8:00 a.m.-7:30 p.m., Monday through Thursday, for the first week of each quarter and semester.

regular hours:

8:00 a.m.-4:30 p.m., Monday through Friday, fall through spring.*

*** harold d. smith bookstore (west bank)**

(The West Bank Bookstore sells books for courses in the College of Business Administration, as well as for Social Science, Political Science, and History courses.)

Telephone: 373-4450.

special hours:

8:00 a.m.-7:30 p.m., Monday through Thursday, for the first week of each quarter and semester.

8:00 a.m.-6:30 p.m., Monday through Thursday for the second week of Fall Quarter and Semester.

regular hours:

8:00 a.m.-6:30 p.m., Monday and Thursday, fall through spring.*

8:00 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 pick-up in the evening.

*** coffey hall bookstore (st. paul campus)**

(Coffey Hall Bookstore sells book for courses taught on the St. Paul campus).

Telephone: 373-0800

special hours:

8:00 a.m.-6:30 p.m. for the first week of each quarter and semester.

regular hours:

8:00 a.m.-4:30 p.m., Monday through Friday, fall through spring.*

off-campus centers

Textbooks and limited supplies are sold at each center only for classes held at that location.

carl sandburg junior high school

Fall Quarter and Semester—5:30-7:30 p.m., Thursday and Friday, Sept. 12 and 13.

Winter Quarter—5:30-7:30 p.m., Thursday, Dec. 12.

Spring Quarter—5:30-7:30 p.m., Tuesday, March 25.

richfield senior high school

Fall Quarter and Semester—5:30-7:30 p.m., Thursday and Friday, Sept. 12 and 13.
Sept. 12 and 13.

Winter Quarter—5:30-7:30 p.m., Thursday, Dec. 12.

Spring Quarter—5:30-7:30 p.m., Wednesday, March 26.

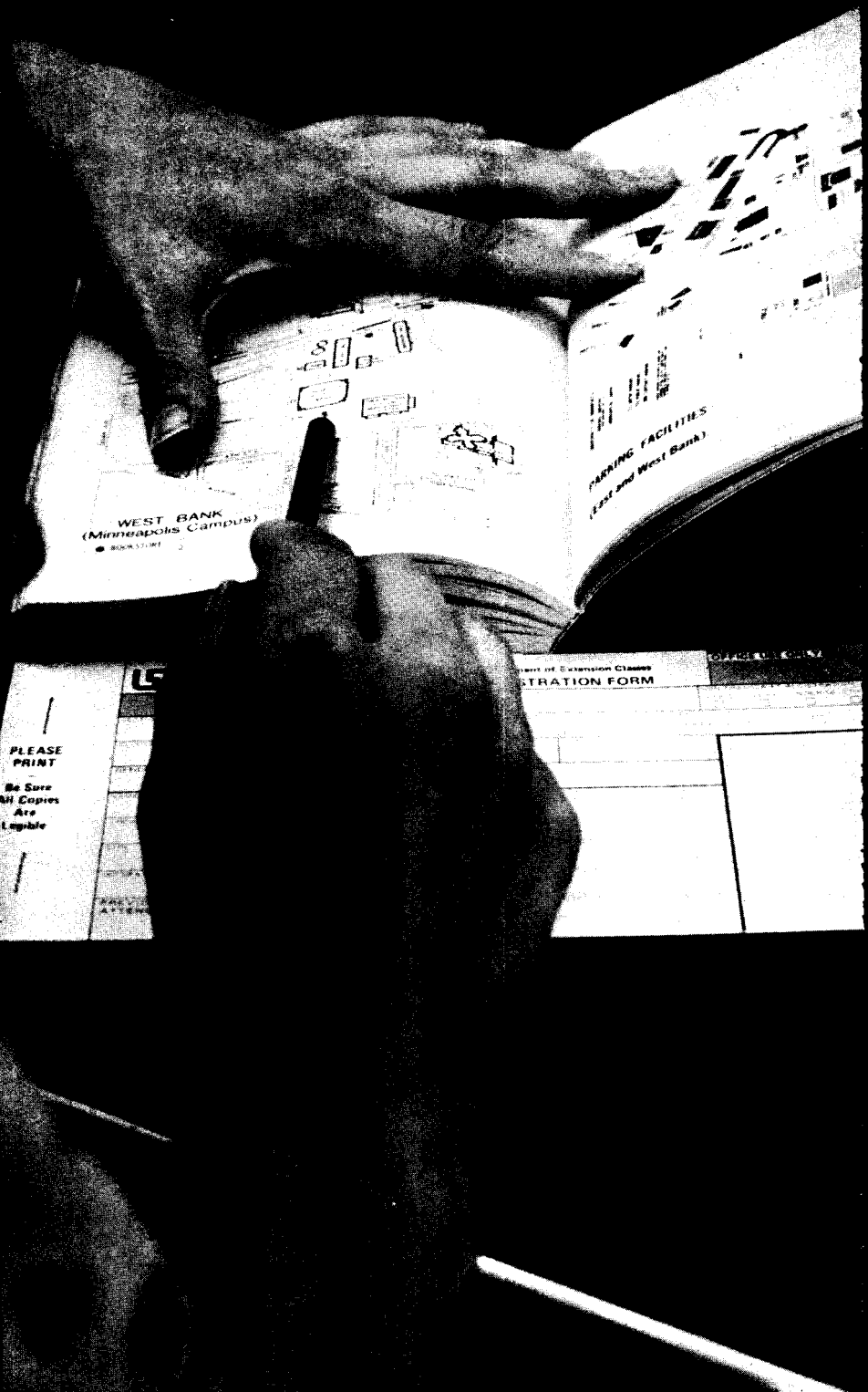
roseville district office (for classes at kellogg senior high school)

Fall Quarter and Semester—5:30-7:30 p.m., Thursday and Friday, Sept. 12 and 13.
Sept. 12 and 13.

Winter Quarter—5:30-7:30 p.m., Wednesday, Dec. 11.

Spring Quarter—5:30-7:30 p.m., Wednesday, March 26.

*See summer bookstore hours in May issue of **Info**. Call 376-7500. See maps showing locations of bookstores in back of bulletin.



WEST BANK
(Minneapolis Campus)
● BOOKSTORE

PARKING FACILITIES
(East and West Bank)

Department of Extension Classes
REGISTRATION FORM

PLEASE PRINT

Be Sure All Copies Are Legible

admission
auditors
cancelations and refunds
changes in course information
course numbering
grades—a-n and s-n
late registration and additions
prerequisites
refunds
symbols and abbreviations
transferring classes
tuition and fees
reduced tuition plans (no credit)

admission

Admission to Extension Classes is open. There are no entrance requirements; registrants need not possess a high school diploma. One need only possess a desire to learn.

Registration in specific programs or classes may require prerequisite courses or experience. (See **prerequisites**, page 31)

Students wishing to register for graduate credit, refer to page 49.

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.

A student who has been dropped from any unit of the University or placed on probation should clear with his college before registering for Extension Classes, otherwise there is no assurance that the credits will be accepted by the college from which he wishes to earn a degree.

auditors

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; if he does not attend, he may be given a grade of incomplete by the instructor. 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, Minneapolis, Minnesota 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**, page 32).

cancellations and refunds

cancellations (how to drop a course)

Any student who wishes 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, Minneapolis, Minnesota 55455. By so doing, he will, if he is eligible, receive a refund, (see **refunds**, page 32), and will likewise insure entry of the appropriate symbol on his grade report. If a student officially cancels 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, he will automatically receive a "W" (withdrawal) on his grade report. This symbol means "official cancellation without grade." If a student cancels after the above-stated period, the instructor may give him a "W" if the student is doing passing work. It is advisable that the student inform his instructor of the reason for canceling.

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

No instructor is authorized to accept cancelation of any registration.

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

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 cancelations. 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. 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.

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.

course numbering

All University courses for 1974-75 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 registering for graduate credit

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 primarily for graduate students) for graduate credit, see **graduate credit**, page 49.

grades—a-n and s-n

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.

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. 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.

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 cancelation without grade. It is assigned in all cases of official cancelation 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 cancelation. If he is not doing passing work, the instructor will assign the grade of N (no credit). It is advisable, therefore, that any student considering cancelation 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 his instructor.

The symbol V (visitor) indicates registration as an auditor or visitor.

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 I.

A student 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 he intends to take his 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). Changes can be made in person or by writing or calling the Department of Extension Classes, 101 Westbrook Hall, University of Minnesota, Minneapolis, Minnesota 55455 (373-3195). If the student does not indicate the grading system desired on the class card, the A-N system will apply.

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.

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 **Calendar** in the front 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 classes unless a student has attended one of the first two class meetings. After the second class meeting of any class 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 the term. Beyond this point any registration accepted 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 can attend the second class meeting. If the class meets twice a week, the registration must be made at a date that will permit him 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.

The following conditions must be met for a student to register during or after the third week:

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.

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 by the student personally.

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 (see **symbols**, page 33) unless otherwise indicated. Most advanced courses do have prerequisites and cannot usually be carried satisfactorily unless the student has had the stated previous course or its equivalent. In some instances, students who have had a reasonable equivalent of study, training, or experience related to the course desired may be exempted from the prerequisite by the instructor. Students who are in doubt as to their qualifications for a course, but believe

they are qualified, should register for the course and consult the instructor at the first class session. If the instructor decides that a student is not qualified, he 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 second week of classes (see **refunds**, below). A prerequisite course may not usually be taken for credit after the advanced course has been satisfactorily completed.

reduced-tuition plans (no credit)

Regular Extension credit courses marked with a ♦ symbol after the number and course title in **course offerings**, see page 97, are open for no-credit registration at reduced tuition.

Registration dates (pages 9-19) and procedures (page 35) for ♦ courses are no different than for any nonlimited 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. (A \$10 transfer fee will be charged for transfer from half-price to credit registration, or from credit registration to half-price.)

Plus-60 plan—Individuals age 60 or older may register for the marked classes for only \$3 (not refundable).

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. The adult must present a current registration receipt at the time the youth registers, and assumes the responsibility for judging the appropriateness of the class sessions for his 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.

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, before the end of the second week of classes:
 1. Ask the instructor for a note with an appropriate statement.
 2. Present this note, together with his fee statement, in person at any Extension office. After the second week of classes the regular refund regulations will apply. It is the student's responsibility to obtain and present his 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. 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 cancelation fee will be charged for cancelation 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 cancelation 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:

	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

Cancelations 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.

For the student's convenience, this information is also printed on his 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.

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

symbols and abbreviations

The following symbols and abbreviations 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 classes, pages 36-38.

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.

★ Course also available through Department of Independent Study.

◆ Regular credit course open for registration on a reduced, no-credit, tuition plan (see page 32).

cr credit

Qtr Quarter

Sem Semester

Sp Special

transferring classes

Students who wish to transfer classes after being officially registered can do so either in person at 101 Westbrook Hall, or by mail (call 373-3195 for transfer forms). (No transfer by mail will be done for reduced tuition courses.)

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 the student has attended the second week of the class into which he wishes to transfer, and has obtained written permission from the instructor of the class he wishes to enter.

There will be no transfer fee if: (1) University requests transfer be made; (2) transfer is required by an N grade in prerequisite course (see **grades**, page 30); or (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 cancelation of class.

Note: Those wishing to take a University Extension class for no credit, but needing a transcript and a record of their registraton, must register as an auditor and pay full tuition.

Students unable to pay full tuition for credit courses may be eligible for tuition assistance (see **financial aids and loans**, page 48).

There will be no transferring between class sections without special permission from the Department of Extension Classes.

The student is requested to present his fee statement at the time of transfer.

tuition and fees

The 1974-75 tuition for Extension Classes is:

\$14 per credit	For 1XXX and 3XXX level courses Certificate courses Entrance credit courses Noncredit courses (does not necessarily apply to reduced tuition courses)
\$15 per credit	For 5XXX level courses
\$16 per credit	For 8XXX level courses

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, page 28).

The full amount of the tuition and other fees is payable at the time of registration. Special 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 \$3 handling fee is charged for all checks returned by a bank. **No arrangements for partial payment can be made.** Students in need of financial assistance should see **financial aids and loans**, page 48. 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 symphony tickets.

For information on tax deductions for Extension class tuition, see page 53.

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012

register in person or by mail

Be sure to read the **registration information** and **general information** sections before you register.

Note: Registration procedures differ for limited and for nonlimited 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 the questions students ask are answered on these pages in the Bulletin.**)

how to register by mail

for nonlimited enrollment classes (those which have no limit on number of registrants)

1. To obtain official registration forms for nonlimited classes, fill out the "nonlimited" portion of the request postcard in the back of this Bulletin and mail it to 101 Westbrook Hall. (The postcard requests will be processed in the registration office two weeks prior to each registration period.)
2. Upon receiving the official registration forms, fill them out using a ballpoint pen on a hard surface. (If all copies are not clearly legible, forms will have to be returned to the sender.)
3. Return the forms with a check or money order payable to the University of Minnesota for the full amount of tuition and fees, if any. (Checks or money orders for late registrations [postmarked after midnight of the last day of official registration] must include the late fee specified on page 31. Checks must be for the exact amount of tuition and fees.)

Note: No person registering under authorization from military, federal, state foreign agency, institution, company, scholarship or loan fund may register by mail without permission from the Special Registration office, Department of Extension Classes, 138 Westbrook Hall, Minneapolis campus (373-4871). Normally, such registrations must be made in-person.

for limited enrollment classes (those which have a limit on number of registrants)

Registration is limited in those courses marked with an asterisk (*). Students may register in such classes only after they have obtained limited class reservation cards.

Students may obtain limited class reservation cards in two ways:

I. By mail in advance. Complete the limited class section on the request postcard in the Bulletin and mail according to the dates listed on page 37.

Note: If the class requested is filled when the request postcard is drawn (**selection is random**) the student will be notified that the class is closed. If the class is not filled a limited class reservation card and registration forms will be sent.

Following are the days when the request postcards will be drawn:

*Request postcards received during the three-day pre-registration period (see page 37) will be processed first on the Thursday following the three-day pre-registration.

*Request postcards received on the Friday preceding and the Thursday following the three-day registration period will be processed second.

*All request postcards received in the office between the Friday following the three day pre-registration period and the day before in-person registration begins will be processed last.

Note: The limited class reservation cards, forms, tuition and fees must be returned by deadlines indicated on the limited class reservation card. Mail registrations must be postmarked on or before the due date. Registrations received via campus mail after the due date will be considered too late to be accepted. If fees are not paid by the date indicated, the reserved placed will be released. No cash will be accepted before in-person registration.

Billing for tuition: A person whose tuition and fees are to be billed to a company, scholarship or the military, **MUST COMPLETE REGISTRATION IN PERSON** and present an authorization, along with the limited class reservation card, not later than the third day of the official registration period for the term in which he is registering. See registration dates on pages 9-19.

All request postcards for limited classes received on days other than those mentioned above will be sent back to the sender with a note giving in-person registration dates.

II. In-person, during registration periods only. Limited class reservation cards may be obtained during in-person registration periods for classes which have not been filled during the mail pre-registration period.

Closed classes—Limited 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 a student has an unusual and compelling reason to be admitted to a closed class he may state his 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 classes).** Starting the second week of classes, late registrations will be assessed the appropriate late fee. **Exception:** Because of classroom limitations, students usually may not be admitted to closed classes which meet in any off-campus Extension Center.

limited enrollment class registration dates

fall quarter and semester

August 19-21 Initial 3-day period for receipt of limited class post card requests in the Extension Classes campus office.

August 22 Office will begin mailing reservation cards and registration forms to students whose requests are honored; students whose requests cannot be honored will also be notified by mail.

winter quarter

November 4-6 Initial 3-day period for receipt of limited class post card requests in the Extension Classes campus office.

November 7 Office will begin mailing reservation cards and registration forms to students whose requests are honored; students whose requests cannot be honored will be notified by mail

Spring semester

January 6-8 Initial 3-day period for receipt of limited class post card requests in the Extension Classes campus office.

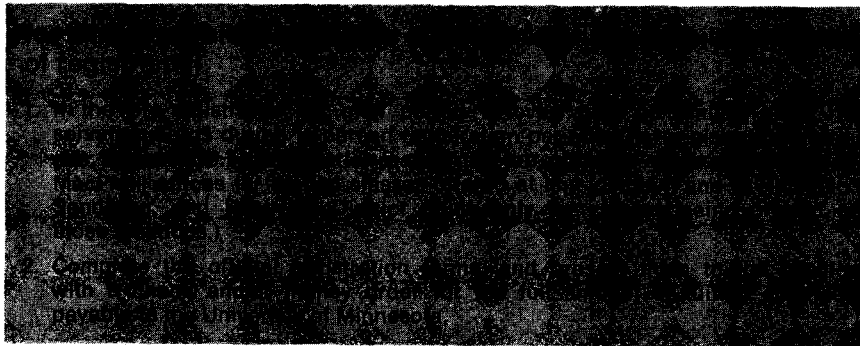
January 13 Office will begin mailing reservation cards and registration forms to students whose requests are honored; students whose requests cannot be honored will be notified by mail.

Spring quarter

February 24-26 Initial 3-day period for receipt of limited class post card requests in the Extension Classes campus office.

February 27 Office will begin mailing reservation cards and registration forms to students whose requests are honored; students whose requests cannot be honored will also be notified by mail.

how to register in person




for nonlimited enrollment classes (those which have no limit on number of registrants)

1. Obtain official registration forms at the campus, or MacPhail offices (listed on page 21) no earlier than two weeks prior to the opening of the in-person registration period, or during in-person registration at any of the Extension Classes' offices.

The official registration form shown below is for semester, quarter, special term and special class courses, including noncredit and reduced tuition courses. Check the course description in this bulletin for the type of course. Each description 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. See index in the back of this bulletin.

2. Fill in all information requested. Please use a ballpoint pen and press hard. Be sure to fill in your birthdate.
3. Have all forms checked by the tally clerk.
4. Pay the cashier. **You are not registered until your tuition and fees are paid.** (Checks must be for the full amount of tuition and/or fees and made payable to the University of Minnesota.)

 Continuing Education and Extension UNIVERSITY OF MINNESOTA		Department of Extension Classes REGISTRATION FORM		OFFICE USE ONLY	
DEPARTMENT		COURSE NO.		COURSE TITLE AS APPEARS IN BULLETIN	
SECTION		CREDIT DAY		LOCATION	
TUITION		SPECIAL FEES		COURSE FEES	
OFFICE USE ONLY		ROOM		HOUR	
NAME LAST		FIRST		MIDDLE	
LOCAL STREET ADDRESS (INCLUDE APT. NO. IF APPROPRIATE)		STATE ABBREV.		ZIP CODE	
CITY		HOME PHONE		SEX	
OCCUPATION		BUSINESS PHONE		EXT.	
PREVIOUS U of M ATTENDANCE		CONTINUING EDUCATION and EXTENSION 19__		DAY SCHOOL COLLEGE & YEAR 19__	
NON TRANSCRIPT REGISTRATION		GRADE BASE		GRADUATE CREDIT REQUESTED	
PRICE OVER \$2		A.N. <input type="checkbox"/> S.A. <input type="checkbox"/> AUD. <input type="checkbox"/>		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
ENROLLMENT PERIOD 19__		LATE FEE		COURSE TOTAL	
FALL QTR <input type="checkbox"/> (1)		10 WEEK SUMMER TERM <input type="checkbox"/> (6)		SPECIAL TERM <input type="checkbox"/> (9)	
FALL SEM <input type="checkbox"/> (2)		MONTH DAY YEAR		MONTH DAY YEAR	
WIN. QTR <input type="checkbox"/> (3)		START DATE		MONTH DAY YEAR	
SPR. QTR <input type="checkbox"/> (4)		END DATE		MONTH DAY YEAR	
SPR. SEM <input type="checkbox"/> (5)					
1ST SUMMER TERM <input type="checkbox"/> (7)					
2ND SUMMER TERM <input type="checkbox"/> (8)					
10 WEEK SUMMER TERM <input type="checkbox"/> (6)					

campus activities, services and facilities open to extension students

car pool

class attendance

credits

credits obtainable without required class attendance

faculty

fee statements

financial aids and loans

funding of the extension classes program

grade reports and transcripts

graduate credit

grievance procedures

military information

off-campus and special courses

student board

student representation, university of minnesota senate

tax deductible educational expenses

transfers from other institutions

transfers within the university

campus activities, services and facilities

art rentals

The University Art Gallery maintains a rental collection of framed original prints, watercolors, and drawings. Extension students may rent art pieces for use in the home or current place of residence. Rental office is open the first one or two weeks of each quarter (watch **Info** for exact dates) 9-11 a.m. and 2-4 p.m., Monday through Friday, and 5:30-7:30 p.m. on the first night of each quarter and semester. The Rental Office is M-16 Northrop Auditorium (one flight up in the northwest corner of Northrop). The cost is \$1.25 per item per quarter plus sales tax. After the open rental period, students may rent compositions by appointment only (373-5685).

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 \$4.72 per quarter or \$7 per semester, which 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. A 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 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 18). Since facilities are heavily used, often to capacity, their use occasionally may be restricted.

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 the student cancels classes during the refund period he must surrender his facility fee receipt at the time of cancelation. Regular refund policies will apply.

athletic tickets

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—\$14 FOOTBALL TICKET. Admits to all home varsity football games (six games); Ohio State football game will be on Sept. 14, prior to Welcome Week, so seating will be General Admission. All other games will have reserved seats. Also admits to all regularly scheduled home baseball, gymnastics, swimming, track and wrestling home intercollegiate events—general admission seating.

Plan No. 2—\$12 BASKETBALL TICKET. Admits to all home, regularly scheduled intercollegiate basketball games. Seating is non-reserved in a designated student-staff area.

Plan No. 3—\$9 HOCKEY TICKET. Admits to all home, regularly scheduled intercollegiate hockey games. Seating is non-reserved in a designated student-staff area.

Plan No. 4—\$6 SWIMMING, GYMNASTICS, TRACK, WRESTLING AND BASEBALL TICKET. Admits to all home, regularly scheduled intercollegiate games in these five sports. Seating is non-reserved in a general admission area. (Note: Not applicable if Plan No. 1 has been purchased.)

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) Ticket in the Fall: At Williams Arena lobby on University Avenue across from the Stadium from Monday, Sept. 16 through Saturday, Sept. 21.

Hours—9 a.m.-4 p.m. daily, except Saturday, Sept. 21, from 9 a.m.-noon. Athletic ticket sales will continue at Bierman Field Athletic Building after Sept. 23.

Sale of Plans No. 2, 3 and 4: The special plans will be on sale beginning in October 1974, with the application and purchase in person.

Regulations governing purchase, transfer, and cancelation of the above tickets are available on request to the Athletic Ticket Office, Bierman Field Athletic Building (373-3181).

1974 Home Football Schedule

Sept. 14—Ohio State
Sept. 21—North Dakota U
Sept. 28—Texas Christian

Oct. 19—Iowa (Homecoming)
Nov. 2—Northwestern
Nov. 16—Illinois

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 Williams Arena during Welcome Week in September. No proof of enrollment is required to order in the spring. A paid fee statement must be presented, however, to claim ticket in the fall. 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).

car pool service

The Department of Extension Classes has initiated a computer assisted car pool service.

To join a pool, call 373-3195, and request a car pool application for each evening you are planning to take an Extension class. Mail the application(s) to 101 Westbrook Hall, no later than the last day of in-person registration during any term (see calendar section, pages 9-19).

By the second week of the term you will receive a computer print-out which lists the names, addresses and telephone numbers of students working or living near you who are interested in car-pooling. You must make your own contacts for specific arrangements.

The more students who participate, the better the service will be. (Extension classes cannot guarantee a car pool match for students.) For more information, call the University of Minnesota Transit Service Offices (373-0374). Be sure to indicate that you want information on the Extension Classes student pool.

health service

Extension Classes students registered for six or more Extension credits (or Extension and day credits) may enroll for University Health Service benefits. The cost of the service (\$31.50 per quarter or \$47.25 per semester) entitles students to use the University Health Service (see East Bank campus map in back of bulletin) during regular hours for medical care and counseling.

(Health Service hours: 8 a.m.-7 p.m., Monday-Friday; Saturday, 8 a.m.-6 p.m. Closed Sunday and holidays.)

Medical care, except for surgery, is provided to a hospitalized student without charge. Other services include: allergy testing and treatment, eye examinations,

and laboratory services. Physical therapy and x-ray therapy are provided up to a cost limit of \$250 per quarter. Charges are made at cost for prescriptions, eyeglasses and dental work.

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 second week of the term. The fee is 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.

For information on these and other benefits, call 373-3195 and request the booklet, "Your Health Service," or pick it up at 101 Wesbrook Hall.

Foreign students health service: contact International Student Adviser, 717 E River Rd, Minneapolis, Minnesota 55414 (373-4094).

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 or \$1 per term. Padlocks are provided (without charge) while the locker is in use. Locker rental offices for all campus locations are located in 224 Northrop Memorial Auditorium; 110 Anderson Hall (for West Bank lockers); and 212 McNeal Hall (for St. Paul lockers). Locker rentals (373-0374).

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. To receive information on all of the East and West Bank and St. Paul campus lounge and study areas, call 373-3195.

minnesota orchestra

For information on special rates for the Minnesota Orchestra, call the Orchestra Ticket Office, 339-3600.

parking facilities

Ample parking is available for Extension students. (See maps in back of **Bulletin**.)

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 the Campus Assistance Center (personal problems), University Police and the emergency operator. Calls can be made to University Information from 7:30 a.m. to 6:30 p.m. Campus phones **cannot** be used for placing off-campus calls. For a map showing phone locations, call 373-1234.

police assistance

The University Police will provide assistance to Extension students—whether the problem is a locked car or closed University garage. 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 three years. To place someone's name on the mailing list, call 376-7500.

Student-Staff Directory

A University student-staff directory is available at any Twin Cities campus bookstore (except the Medical Bookstore) 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 on a subscription basis. The **Daily** covers campus activities and also includes a weekly "Happenings" calendar in the Friday issue. Subscription rates are \$5 per quarter, \$15 per year. **Minnesota Daily** (373-3385).

Connect

Connect, a handbook on student organizations and activities (printed by the Student Activities Center and Orientation Office) may be picked up in 101 Westbrook Hall or 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 Westbrook Hall or call (373-3919).

Field Experience Catalog

The **Field Experience Catalog** informs students about the enormous range of resources available to those who wish to earn a portion of their academic credits through community-based learning experiences. Over 200 programs are listed for your convenience. To obtain a free copy, call 373-3195.

Calendar

A Twin Cities campus **Calendar** is available to all Extension students. The monthly calendar lists University theatre offerings, lectures, art exhibits, music performances, convocations, KUOM broadcasts, University television programs on Channel 2, athletic events, and other recreational and 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).

transportation between campuses

Bus transportation between the Minneapolis and St. Paul campuses is available on special buses labeled "Intercampus" 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 Minneapolis: 7:45 p.m. and every half hour until 10:45 p.m.

Leave St. Paul: 8 p.m. and every half hour until 11 p.m.

There is no charge for riding the bus unless a student enters or exits at bus stops other than those on campus (see **Student-Staff Directory** for route map and bus stops).

Buses stop at 29th and Como and at Carter and Eckles for students using parking lots near those locations. Parking is free at the 29th and Como lot, although there is a charge to board the bus. Bus fare discount cards can be obtained at Bursar's office, 115 Morrill Hall, for \$2. 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.E. corner of Pillsbury Drive and 15th Avenue (across from Eddy Hall). Bus schedules (373-0374).

class attendance

Students (including auditors) are responsible for attending classes in which they are registered. (See also **credits obtainable without required class attendance**, page 45.) A student who cannot attend a class session should arrange with his instructor—in advance, if possible—to make up the work.

credits

All credits listed in the class descriptions 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 a student has been formally admitted to the college from which he expects 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 55.

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.
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. A College of Liberal Arts, College of Business Administration, College of Education, or Institute of Technology student wishing to have degree credits earned in Extension Classes put on his degree transcript should ask the record clerk (in Morrill Hall) of the college in which he is registered to transfer the credits. A General College student must first show his Extension Classes transcript to his college office for approval before asking the record clerk to transfer the credits. A student wishing to have credits earned in Extension transferred to another institution should ask the Office of Admissions and Records (373-2149), to forward a transcript to that institution.

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.

credits obtainable without required class attendance

If through personal experience or occupation, a student has gained knowledge which he believes should qualify him for University credit, or if a person wishes to work on his 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) or the Extension Individual Learning Opportunities (ILOE) Office (376-4500). A handbook which describes the alternatives is available from the ILOE 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 in-

structions 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 in 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) or Extension Individual Learning Opportunities Office (376-4500).

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) or Extension Individual Learning Opportunities Office (376-4500).

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 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) or Extension Individual Learning Opportunities Office (376-4500).

special examination

A student who, through independent study, experience, or study at a non-collegiate institution, has 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. He must be a University Extension student at the time he takes 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 small fee to Extension Classes students who may be considering entering certain degree programs. A student will receive credit upon passing one or more tests, provided he has a satisfactory score and has 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. The student need not be a University College registrant; however, he must have permission from his college office to pursue a program of independent study in University College. He must also have an appropriate faculty member supervise his 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 Independent Study offers a wide variety of courses. Courses marked in this bulletin with a ★ are also taught through 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. Beginning fall 1974, credits earned through the Department of Independent Study may be used to satisfy residence requirements. Interested degree students should check with their college offices for confirmation. The **Independent Study Bulletin** is available from the Department of Independent Study, 45 Wesbrook Hall, University of Minnesota, Minneapolis, Minnesota 55455 (373-3256).

radio and television courses

Continuing Education and Extension offers courses via University Radio KUOM (770 k.c.) or over local television stations. For information on radio courses, contact the Department of Independent Study, 45 Wesbrook Hall (373-3256). For information on television courses, see pages 166-167. Additional information (373-3195).

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.

fee statements

After registration forms are receipted (cashier), the fourth copy (pink slip) is a student's fee statement.

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 will not be returned to students who register by mail.

A duplicate fee statement may be obtained for 50 cents at 101 Westbrook Hall in the event the first one is lost or illegible.

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, scholarship or loan fund, must register in person in 138 Westbrook Hall on the Minneapolis Campus.

Military personnel should read the listing on pages 50-52.

Students registering under the authority of the Cold War Veterans Bill (Chapter 34, Title 38, U.S. Code), should refer to page 51.

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.

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 per quarter or semester. Eligibility is based on monthly net income, number of dependents and special expenses. Information (376-4500).

Extension Loan Fund—Extension students who require financial assistance to pay tuition may be eligible for a loan not to exceed \$50 in any semester, quarter or special term. Such loans are payable within 2 months from date of receipt. The interest charge is approximately 6%. Applications should be made on campus during any official registration period for Extension Classes. Because only limited funds are available, students who need assistance should inquire as soon as possible during the registration periods. No loan applications will be accepted after the second week of the term. Applications taken after the close of official registration periods will be subject to late fees. Contact Extension Classes, 138 Westbrook Hall (373-4871). Students who have an overdue, unpaid balance on a previous loan at the University may apply for another loan only with permission from the Assistant Bursar. West Bank Bursar's Office (373-7915).

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, Minnesota 55104. **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 (725-4100). **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 (N592 Elliott Hall, University of Minnesota 373-7026), or from the Division of Vocational Rehabilitation office in your area.

Federally Insured Loans—Under the Federally Insured Loan Program, a student registered for at least eight credits in day or Extension Classes and working toward a degree program may borrow from a bank or other financial institution. A graduate or an undergraduate student may borrow as much as \$2,500 a year, since the ceiling on loans was raised from \$1,500 to \$2,500 as of March 1, 1973. This process takes a considerable time period so students should apply two to three months before the funds are required. Repayment begins in the 10th month after the student has ceased his course of study. At that time all students pay seven percent interest.

Further information: Office of Student Financial Aid, 107 Armory (373-4021).

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. The borrower can then write checks which would normally overdraw his 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 should contact a bank for further information.

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 over-all enrollments, program adjustments are sometimes necessary, as is the cancelation of classes in which enrollment is low.

grade reports and transcripts

Extension students can secure transcripts showing all credits earned in Extension Classes by calling or writing the Office of Admissions and Records, Window 17, Morrill Hall, University of Minnesota, Minneapolis, Minnesota 55455 (373-2149). (Extension grades are not automatically recorded on (college) day school transcripts. Students must request this transfer. See recording extension credits page 45. Reports of students' grades are sent by the University's Office of Admissions and Records and cannot be furnished by the Extension offices. Students are asked to allow a month's time from the close of a term for Admissions and Records to get grades to them. A student who needs a grade sooner may leave a self-addressed postcard with the instructor, who will mail a grade to the student when it is determined.

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.

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, University of Minnesota, Minneapolis, Minnesota 55455 (373-5817).

Planning a University of Minnesota Graduate Program—The student intending to use courses taken through CEE toward a graduate degree is responsible for planning a coherent and relevant program. He is expected to review his plans

with a qualified faculty adviser or with the Director of Graduate Studies in the field of his 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 his graduate program, he also submits his CEE transcript, which constitutes petition to use the courses he selects 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.) The student may take more than 12 credits through CEE, but he will be able to apply no more than 12 credits to his 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—A student intending to use CEE course work at the graduate level for other than a University of Minnesota graduate degree must indicate on his registration form that he is taking a course for graduate credit. His CEE transcript will show whether or not he 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 then submits his 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.

grievance procedures

An established "grievance procedure" exists in the Department of Extension Classes. If a student believes he has a justifiable complaint about a grade or about classroom procedures, he should first confer about the problem with his instructor. Most problems can be worked out in this way. If a solution satisfactory to him is not reached, he should state the complaint in writing to the Director of Extension Classes, 170 Wesbrook Hall, who will confer with the appropriate academic department chairman. If these procedures do not bring about a solution satisfactory to the student, the CEE or the academic department's grievance committee (a student-faculty 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.

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 per 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 Wesbrook Hall, Minneapolis Campus.

veterans

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, with veterans receiving 1½ months of eligibility for each month or part of a month of active service after that date. Maximum period of training is 36 months, but this period is reduced by training taken under other Veterans Administration programs.

Application for training under this bill may be made by requesting VA Form 22-1990 from the Veterans Office, 138 Wesbrook Hall, University of Minnesota, Minneapolis, Minnesota 55455 (373-5777). The application form must be completed and submitted with DD 214 (discharge papers) to the office after registering for Extension classes.

Each time a veteran registers for Extension classes and wishes certification to the Veterans Administration, he must complete the Cold War Veterans Information Sheet, which is available at all registration centers or by mail (373-5777). Check the appropriate box on the return request postcard in this bulletin if registering by mail.

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	\$220	\$261	\$298	\$18
¾ Time 9	165	196	224	14
½ Time 6	110	131	149	9

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

Tuition and fees must be paid by the veteran at the time of registration. He will be reimbursed later or paid a monthly allowance, whichever is appropriate. All books, supplies, and equipment required for use in the classroom must be purchased personally by the veteran, since the Veterans Administration will not refund the cost of these materials.

For further information on the Cold War Veterans Bill, call or write the Veterans Office, 138 Wesbrook Hall, University of Minnesota, Minneapolis, Minnesota 55455 (373-5777).

Tutorial assistance—Veterans enrolled under 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 \$50 per 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 \$450. 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 Westbrook (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 (725-4100).

State of Minnesota Department of Veterans Affairs—Under some circumstances World War II and Korean Veterans whose educational benefits under Public Law 346 and 550 have been used and exhausted (not interrupted) may be eligible for tuition assistance from the State of Minnesota Department of Veterans Affairs. Such veterans, if they believe themselves eligible, should contact State of Minnesota Department of Veterans Affairs, Veterans Service Building, St. Paul, Minnesota 55101 (725-4100).

World War II Veterans—Education benefits under P.L. 346 terminated July 25, 1956.

Korean War Veterans—Educational benefits under P.L. 550 terminated January 31, 1965.

off-campus and special courses

An existing credit course may be scheduled anywhere off campus (in a school, church, business, or other neighborhood meeting place) for a sufficiently large group. Also, special noncredit classes can be developed upon request. (Courses of both kinds must be self supporting.) Information (373-5166).

student board

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 his 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.

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 1974-75 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 Wesbrook Hall, Minneapolis campus; or call 376-7500 to have filing forms mailed.

Dates for filing are March 10 through April 5

Upon application for candidacy, the candidate must provide proof of his eligibility: transcripts indicating he is in good standing and meets 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 May 5-11. 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.

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 express requirements of employer, or requirements of law or regulations for keeping salary, status or employment, if the requirements imposed serve 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.

transfers from other institutions

A student who has had university or college work other than at the University of Minnesota, and who intends to work on a degree or certificate program in Extension, should have a transcript with him when he sees an Extension adviser. (See advising and counseling, page 163.) Transcripts may be obtained from the registrar of the institution previously attended.

transfers within the university

A student may take Extension classes without going through formal transfer procedures. However, if the student plans to complete a degree program through the Department of Extension Classes, he should consult the Counseling Department, 314 Nolte Center (373-3905). Please read the section on day school students, page 28, **degree programs**, page 55, and **graduate credit**, page 49.

degrees

undergraduate degrees

associate in arts (A.A.)

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 resident 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, two kinds of comprehensive examinations are used. A student may take the Entrance Comprehensive Exam at any time he decides to work toward an Associate in Arts degree. Results of this testing (which includes, for example, measures of arithmetic and language skills, and of organizational and abstract reasoning abilities) help him identify strengths and weaknesses in his preparation for college work. In the light of the test results, a student may plan his courses with a General College adviser.

The Degree Comprehensive Examination is to be taken when the student nears completion of the required 90 credits. This exam, which is a degree requirement, 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 has overcome his weaknesses and broadened his perspectives in demonstrating a general knowledge in the liberal arts. Arrangements for taking the tests, test interpretation and program planning can be made in the General College office, 106 Nicholson Hall, telephone 373-4104.

bachelor of applied studies (B.A.S.)

bachelor of general studies (B.G.S.)

Students admitted to extended programs in General College work toward certificate programs and/or 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 a counselor. They may be asked to defend and justify their proposals before a faculty-student admissions committee.

Both the B.A.S. and B.G.S. degree programs are highly individualized. In addition to taking course work in subject matter areas, students may earn credit for supervised work experience related to their programs, for non-collegiate post-high school education, for independent study, for participation in community projects, and for other unconventional learning experiences.

A minimum of 180 credits, including the 90 credits necessary for an A.A. degree, is required for both the B.A.S. and B.G.S. degrees. Of the final 90 credits in both baccalaureate degree programs, 45 credits must be taken in General College courses.

The B.G.S. degree requires a minimum of 36 credits in a "concentration" chosen by the student. The "concentration" may best be described as a group of related interdisciplinary courses or credits which provides for in-depth study. Also required are 80 credits from the four main instructional categories defined by the University of Minnesota Council on Liberal Education. The B.A.S. degree requires at least 60 credits in a "concentration" and a minimum of 45 credits in the Council on Liberal Education categories. Both degrees require a minimum of 8 credits of writing.

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 extended programs by making an appointment with a counselor, 10 Nicholson Hall, 373-4400.

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 programs 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: This two-year program of General College, School of Dentistry courses and supervised experience in the University of Minnesota Dental Clinic is available in part through Extension Classes. Dental Assistant courses and clinic work are available in day classes only. General College course work may be taken either in day or Extension Classes prior to beginning the Dental Assistant sequence. An A.A. degree and the Certificate in Dental Assisting are awarded upon the completion of the full program.

ELECTRONICS TECHNOLOGY: Students planning to enter programs at Northwestern Electronics Institute, Control Data Institute, or Brown Institute, or who have completed one of the programs recently, can be granted up to 45 credits toward the A.A. degree. The remainder of the credits, to a total of 90, 30 of which must be in General College courses, may be taken in Extension.

FLIGHT TRAINING: General College will grant 19 credits upon completion of the Commercial Pilot Program at University of Minnesota Flight Facilities. The remainder of the credits necessary for the A.A., including 4 credits in the Ground School course, may be taken in Extension.

HEALTH AND RELATED OCCUPATIONS: Students planning to enter or who have completed programs in health-related occupations may receive up to 45 credits in General College toward a two-year associate in arts degree or up to 90 credits towards a bachelor of applied studies degree. Eligible students are those who are licensed, registered, or certified in a health occupation, and who have completed hospital-based education programs accredited by either the Minnesota Board of Nursing or the American Medical Association's Council on Medical Education. Such health workers include registered or licensed practical nurses, certified laboratory assistants, cytology technologists, histologic technicians, medical office assistants, medical record technicians, radiation therapy technologists, radiologic technologists, and others.

HUMAN SERVICES TRAINING: Most of the General College program, including 15 credits for field work, is available in Extension.

LAW ENFORCEMENT: General College will grant up to 12 credits for completion of an approved police academy training program. Additional credits to complete the requirement for the A.A. may be taken in Extension.

LEGAL ADMINISTRATOR: If a student is admissible to a four-year Extended Program in the General College, most or all of this program will be available in Extension Classes. (See page 57)

LEGAL ASSISTANT: This program and the A.A. degree can be completed entirely in Extension.

MARKETING: With the addition of supervised work experience to the sequence, the Certificate in Marketing will again become available to Extension students.

MEDICAL LABORATORY ASSISTANT: Students planning to enter this program at the Medical Institute of Minnesota or the St. Paul Technical-Vocational Institute, or who have completed one of these programs recently, can be granted elective credits toward an A.A. degree. The remaining credits to a total of 90, can be taken in Extension Classes; 30 of these credits must be in General College course work.

RADIOLOGIC TECHNOLOGY: Students accepted by the University of Minnesota Hospital School of Radiologic Technology may use General College credits taken in day or Extension Classes to complete requirements for an A.A. degree.

RECREATION FOR SPECIAL GROUPS: Much of the course work for this program can be taken in Extension Classes. Specialty courses in recreation programming and in field work are not available through Extension.

VETERINARY MEDICAL TECHNICIAN: This training is available at the Medical Institute of Minnesota, and elective credits are granted toward an A.A. Extension Classes can provide at least one-half of the credits.

VOCATIONAL TEACHER EDUCATION: All of the College of Education credits in the Department of Industrial Education and the General College credits necessary for completion of an A.A. degree are available in Extension Classes.

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 vocational technical schools. The purpose of these arrangements is to combine college courses in general education with specific vocational preparatory programs. Fifty-three major job classifications, some including as many as 20 occupations, are available in the vocational technical schools, and the number of credits which can be accepted varies according to the length of the program. For any completed program, the remaining credits necessary for an A.A. degree, including a minimum of 30 credits in General College course work, are available in Extension.

associate in liberal arts (A.L.A.)

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. A student seeking the A.L.A. through Continuing Education and Extension should arrange early consultation with a member of the Committee on Student Relations and Academic Standing (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, at least 45 with grades of A, B, or C.
2. At least 45 credits earned following admission to the College of Liberal Arts.
3. Satisfaction of the CLA 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); **(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 Westbrook 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.)

The Bachelor of Arts degree may be earned from the College of Liberal Arts in 12 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. A student wishing to earn the B.A. degree through Continuing Education and Extension should talk with a member of the Committee on Student Relations and Academic Standing (373-3905) as soon as he has made his decision.

A candidate 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. He must also satisfy the English composition, foreign language, and Group Distribution requirements. These are defined in statements of graduation requirements, page 61. Finally, a B.A. candidate must complete a major sequence in the field of his choice and complete at least 30 credits in 3000 or 5000 level courses from areas outside his major.

Most students prefer to concentrate on the English composition, foreign language, and Group Distribution requirements in their first two years, leaving the last two years free for work on 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
Art History

Art, Studio
Child Psychology

Economics
English
History
Humanities

Interdepartmental
Philosophy
Psychology-B Sequence
Sociology

The following majors may be nearly completed in Extension Classes; a few courses must be taken in day classes. In some cases the department concerned may be willing to allow substitutions.

Anthropology Political Science Social Welfare

A copy of the **College of Liberal Arts Bulletin** is essential for the B.A. degree candidate. It may be obtained by calling the Bulletin Bureau, 373-2153. In addition, a copy of "Procedures for Obtaining the Bachelor of Arts Degree Through Extension" should be obtained from Extension Classes, 101 Wesbrook Hall, or the Counseling Office, 314 Nolte Center.

changes in graduation plans

CLA graduation requirements have changed several times since 1957; Extension B.A. candidates usually follow the requirements in use at the time of their admission to CLA. Those entering degree programs in Fall 1972 or afterward must meet the requirements stated above, which differ from 1970 requirements principally in specifying A, B, C, or S grade records instead of C averages. Details of other requirements (for both 1970 and 1972 plans) are shown here. A student may usually follow a requirement 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 the 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

Foreign Language-Route I or Route II

Route I: Complete a minimum of 23 credits or be validated at that level by the appropriate language department. Background from high school usually relates to this requirement as follows:

High school study	Additional study in college
4 years	at least 3 cr at higher level in same language
3 years	at least 8 cr at higher level in same language
2 years	at least 13 cr at higher level in same language
1 year	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 foreign language. Background from high school usually relates to this requirement as follows:

High school study

3 years

2 years

1 year

Additional study in college

none in college

5 credits at higher level in same language

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)

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 for Group Distribution requirements, even though courses from some departments may be used in more than one group.
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. (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. 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 Westbrook Hall, or the Counseling Office, 314 Nolte Center.

bachelor of science (B.S.)

The Bachelor of Science degree is offered by the Departments of Communication Disorders and 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 is not included and the major concentration is more extensive.

For further information call the Counseling Office, 373-3905.

bachelor of elected studies (B.E.S.)

The experimental Bachelor of Elected Studies degree is open to a limited number of Extension students. This degree offers wide latitude in individual program planning toward a degree. B.E.S. candidates must meet the usual CLA quality standards (see first sentence, paragraph two, under "Bachelor of Arts," page 60) but are exempted from English composition, foreign language, and major requirements. They design their programs to meet their particular needs and desires, and may include up to 30 credits in courses not normally acceptable for a CLA degree.

For information about admission to the program, 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 skillful students, is open to Extension students. Many of the program's opportunities are available in the late afternoons or evenings, and involve independent research or tutorial projects.

Honors activities—including honors courses and colloquia (small discussion groups for freshmen and sophomores) are open to all students, whether or not the students are enrolled in CLA or in the program. Other activities (College Honors Seminars for juniors and seniors) are restricted to students enrolled in the program. Extension students who meet the program's requirements are also eligible to graduate with one of the traditional Honors designations, **cum laude**, **magna cum laude**, **summa cum laude**.

All 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 availability to participate.

Mainly, the Honors Program's purpose is to provide certain 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.)

The Bachelor of Science in Business degree from the College of Business Administration may be earned through Continuing Education and Extension. A student wishing to complete the B.S.B. degree through Extension should talk with a member of the Extension Committee on Student Relations and Academic Standing (373-3905) as soon as he has made this decision.

A candidate for the degree completes 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.

Honors—Students with the appropriate grade point average may graduate with "distinction" or "high distinction." For more information, call the College of Business Administration (373-2237) or the Counseling Office (373-3905).

NOTE—Acct 1024-1025, 1026; Econ 1001, 1002; Math 1141, 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 lower division prebusiness requirements and upper division 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**

I. Communication, Language, Symbolic Systems

A. Freshman English—8 credits

Comp 1001-1002

Comm 1001-1002

Exemption from the requirement

B. Mathematics—10 or more credits

Math 1141 or 1131 or 1201-College Algebra

Math 1142 or 1211 and 1221-Calculus

Students with inadequate preparation may be required to take Math 0009 before taking Math 1141 or 1131. High school trigonometry or Math 1008 is a pre-requisite for Math 1201. Students who plan to take course work in mathematics beyond the level of elementary calculus should take Math 1211 and 1221 rather than Math 1142.

II. The Physical and Biological Sciences—8 credits

In one or more natural sciences to be selected from the following courses:

Anat 1004

Ast 1008; 1009; 1011; 1012; 1013

Biol 1001-1002†; 1011, 1101, 1102, 1104, 1106

Biol 3001; 3022

Bot 1103; 1009; 1012; 3003; 3109; 5103; 5105

Chem 1004-1005†; 1006; 1301; 3100 with 3101; 1031-1032-1033

Geo 1001; 1002; 1007; 1008; 1111; 1112; 1601; 3101; 3401; 5004

Geog 1425

NSci 1004-1005†; 1006

Phys 1014-1024 with labs 1015-1025; 1031-1032; 1041-1042; 1104-1105-1.06; 1121-

1122; 1271-1281-1291 with labs 1275-1285-1295; 3801

IT 3101; 3201; 3301; 3401

III. Man and Society—15^{or}17 credits

Econ 1001, 1002 (6-8)

Psy 1001 (5)

Soc 1001 (4)

IV. Artistic Expression—8 credits

Students must fulfill the requirement of 8 credits in artistic expression

** a series linked by a hyphen must be taken in the order shown.

† all courses preceding dagger must be completed before credit is given for either course.

before entering the College of Business Administration. Only the following courses may be used to meet this requirement:

Afro-American Studies (all courses)
American Indian Studies (all courses)
AmSt 1101 through 3970
Arch 1021, 5051, 5052, 5053, 5054, 5055, 5056
Art History (all courses)
Art, Studio (all courses)
Clas 1001 through 1042
English Literature (all courses)
Foreign Literature
Humanities (all courses)
Music (all courses)
Spch 1101, 1104, 3201, 3202, 3203, 3204, 5201
Theatre (all courses)

V. Business Courses—12-13 credits

Acct 1050, 1051—Principles of Accounting (8) or Acct 1024-1025, 1026—Principles of Accounting (9)
QA 1050—Elementary Managerial Statistics (4)

VI. Students planning to enter the B.S.B. Accounting Program are required to complete Comp 1027—Advanced Writing (4) in addition to the above.

VII. Electives to complete the approximately 90 credits required for admission.

institute of technology

Through registration in Extension Classes students may earn all but approximately 20 credits towards a Bachelor's degree in Electrical Engineering, Mechanical Engineering, or Computer, Information and Control Sciences. 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. For specific degree requirements please consult the **Institute of Technology 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 (373-3305).

The following are tentative schedules designed to assist students in Electrical Engineering and Computer, Information and Control Sciences in planning a program of studies leading toward the completion of a certificate or degree program. Every effort will be made to adhere to these schedules, but they are subject to change owing to unforeseen circumstances. Courses in addition to those listed may also be offered.

electrical engineering

(see p 159 for course descriptions)

SEQUENCES LAST TAKEN	1974-1975			1975-1976			1976-1977			1977-1978			1978-1979
	F	W	S	F	W	S	F	W	S	F	W	S	
3100-3101-5100 if have not taken 5000-5001 should take	5055	↑		Day School and/or UNITE									
1510	3010	3011	3012	3050 3400	3051 3401	5050 3402	3100	3101	5100	4th Yr. E.E. Course if offered			
1500-1501													
3010-3011	3050 3400	3051 3401	5050 3402	3100	3101	5100	4th Yr EE Course if offered			Day School and/or UNITE			
3050-3051-5050	3100	3101	5100	4th Yr EE Course if offered			Day School and/or UNITE						
5000-5001 or	5055	↑	↑	Day School and/or UNITE									
APPROPRIATE PREREQUISITES	.	.	1510	3010	3011	3012	3050 3400	3051 3401	5050 3402	3100	3101	5100	
				.	.	1510	3010	3011	3012	3050 3400	3051 3401	5050 3402	
							.	.	1510	3010	3011	3012	
										.	.	1510	

*Could take: 3821 Math 3211 or 3012 or 3231; Math 3091 or 3092; Phys 1291/1295; M.E. 3301-3303; AEM 3036, ENGL 3085; Etc.

†E.E. Department may offer additional 4th year elective if feasible

computer, information, and control science

(see Institute of Technology Bulletin for full course descriptions)

To be offered 1975-76:

- CICS 1100 Introduction to Fortran Programming I 2 credits
- CICS 1101 Introduction to Fortran Programming II 2 credits
- CICS 1105 Fundamentals of Algorithms and Languages I 4 credits
- CICS 1106 Fundamentals of Algorithms and Languages II 4 credits
- CICS 3001 Perspectives on Computers and Society 4 credits
- CICS 3101 A Fortran Introduction to Computer Programming 4 credits
- CICS 5101 Structure and Programming of Software Systems I 4 credits
- CICS 5102 Structure and Programming of Software Systems II 4 credits
- CICS 5104 System Simulation: Languages and Techniques 4 credits
- CICS 5121 Introduction to Data Structures 4 credits
- CICS 5301 Numerical Analysis 4 credits
- CICS 5302 Numerical Analysis 4 credits
- CICS 5400 Introduction to Automata Theory 4 credits
- CICS 5502 Introduction to Operating Systems 4 credits
- CICS 5503 Introduction to Compiler Construction 4 credits

To be offered 1976-77:

- CICS 1100 Introduction to Fortran Programming I 2 credits
- CICS 1101 Introduction to Fortran Programming II 2 credits
- CICS 1105 Fundamentals of Algorithms and Languages I 4 credits
- CICS 1106 Fundamentals of Algorithms and Languages II 4 credits
- CICS 3101 A Fortran Introduction to Computer Programming 4 credits
- CICS 5101 Structure and Programming of Software Systems I 4 credits
- CICS 5102 Structure and Programming of Software Systems II 4 credits
- CICS 5122 Advanced Data Structures 4 credits
- CICS 5401 Introduction to Formal Languages 4 credits
- CICS 5504 Formal Methods in Compiler Construction 4 credits
- or
- CICS 5505 Optimization in Compilers 4 credits

To be offered 1977-78:

- CICS 1100 Introduction to Fortran Programming I 2 credits
- CICS 1101 Introduction to Fortran Programming II 2 credits
- CICS 1105 Fundamentals of Algorithms and Languages I 4 credits
- CICS 3001 Perspectives on Computers and Society 4 credits
- CICS 3101 A Fortran Introduction to Computer Programming 4 credits
- CICS 5101 Structure and Programming of Software Systems I 4 credits
- CICS 5102 Structure and Programming of Software Systems II 4 credits
- CICS 5103 Introduction to Assemblers 4 credits
- CICS 5121 Introduction to Data Structures 4 credits
- CICS 5501 Artificial Intelligence and Heuristic Programming 4 credits
- CICS 5301 Numerical Analysis 4 credits
- CICS 5302 Numerical Analysis 4 credits

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 were offered through Extension in the 1973-74 academic year. 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 CICS 3101 Comp 1001 or Comm 1001	5 4 4	5 5	23
3	Phys 1291, 1295 AEM 3036, 3016 EG 1025 EE 1510 Comp 1002 or Comm 1002	4 4	5 4 4 4	25
4	CE 3400 EE 3010 Liberal Education	5 5 5	4 4	23
5	ME 3201, 3203, 3205 ME 3301, 5342, 3303	4 4 4 4 4 4		24
6	ME 3900 Liberal Education Elective	5 5 4 4	4	22

university college

The name University College means many things to many people because under this single rubric are several degree-granting units, each of which has its own particular set of goals and procedures. This unusual situation of "colleges within a college" is the result of University College's unique mission within the larger University of Minnesota: to house undergraduate experimental programs of collegiate scope. By their nature, all of University College's specific programs are, therefore, 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 go under some other auspices. Presently, University College has three degree-granting programs: The Inter-College Program, the Experimental College, and University Without Walls. Extension students interested in working toward a degree through the Inter-College Program or Experimental College should contact the Extension Counseling Department, 314 Nolte Center (373-3905) for additional information.

The Inter-College Program draws from the entire University for its courses and has no fixed curriculum. An applicant for admission arranges a study program, including suitable amounts of work in two or more colleges of the University, which fits his individual needs. He should be at least a third-quarter sophomore who has completed one full quarter or its equivalent at the University of Minnesota before he is eligible for admission, and if he is accepted in a degree program, he may work toward either a B.S. or a B.A. degree.

The Experimental College (1507 University Avenue S.E.) is a learning community of students and staff which admits both freshmen and more advanced undergraduates. Student programs are individually designed and negotiated with staff and other students through quarterly learning contracts; there are no formal courses as such, but the student may include in his program formal courses from other colleges of the University. The Experimental College strives primarily to maximize the individual student's freedom, while also expecting a student to participate in the governance of the college and in the attempt to create an interdependent-learning atmosphere in the college.

University Without Walls allows students to obtain a baccalaureate degree through individually tailored and self-directed study projects, usually outside of regular courses and according to the student's own time schedules. UWW is intended for the student who has clear educational goals but who because of assorted barriers cannot take advantage of other University offerings. It features the use of faculty both from the University and the non-academic community in addition to the main UWW staff, and bases the student's readiness for graduation on the demonstration of knowledge and competency as judged by a "Graduation Committee." Further information may be obtained from the University Without Walls (373-3919).

Information about University College is available in 105 Walter Library, University of Minnesota, Minneapolis, Minnesota 55455 (373-4638).

master's 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 at the end of 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 of the following languages is required: Greek, Latin, French, German or Italian.

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 (373-5817).

Candidates will be admitted fall and winter quarters. In the appropriate space on the application form, the applicant should indicate that he or she is applying for the M.A. program offered through CEE. In addition, the Department of English requires the applicant 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, 207 Main Engineering by Aug. 23, 1974 for fall quarter, 1974, and by Dec. 6, 1974 for winter quarter, 1975. (Students wishing to apply for fall, 1975, candidacy may take the Graduate Record Examination on the University of Minnesota, Minneapolis Campus, in December 1974, January, February, April or June 1975.)

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 49).

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 afternoon 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 in late afternoon (4:15-6:00 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 page 317 for this year's course offerings. Students may register in these courses either through Extension or through the Graduate School. (But see note below on 12 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 written examination. This examination is composed by the individual student's faculty committee, who follow an outline developed by the student and his 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 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 310 Johnston Hall, or by calling 373-5817. 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 (373-4144), 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 intensive certificate programs are conducted by Continuing Education and Extension. 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 classes, are college level in quality, and represent an accelerated and specialized approach to subject matter in the areas represented. They are not, however, transferable to a degree program.

Work on a certificate may be done in extension classes, independent study, day school, summer session, or any combination of these. (Certificate programs marked with the symbol ★ are available entirely through the Independent Study Department.) 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. 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 3.00 to 3.49 grade point average, overall, will be awarded a certificate "with

distinction." A student earning 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. The Honors Program is not retroactive.

Colleges here 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.

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

(6-9 Credits)

This is a 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 two quarters. The possibility of adding a third quarter to the program will be determined at a later point, and will be dependent on student interest.

Faculty will be from the Minneapolis Clinic of Psychiatry and Neurology and the Metropolitan Medical Center. All classes will be held at the Metropolitan Medical Center, 900 South 8th Street, Minneapolis, in the Lower Level Conference Room.

The program will be limited to 50 students. Preference will be given to those currently employed in the field of mental health or upon special permission from the program coordinator, Ms. Mary Jones, 338-7744, extension 424.

The program must be taken in its entirety at the University of Minnesota.

Ad Psy 0101C Training Course for Mental Health Workers (3 credits)

Ad Psy 0102C Training Course for Mental Health Workers (3 credits)

Ad Psy 0103C (pending)

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 and a listing of the quarterly offerings, please write to the Department of Continuing Education in Social Work, 321 Nolte Center, University of Minnesota, Minneapolis, 55455; or call (612) 373-5831.

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, Career-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

(44 credits)

The Fire Protection Certificate program was planned by the Fire Service Information Research and Education Center, 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.

The Fire Protection courses will be available only through the Department of Independent Study. The courses are marked with a double asterisk. Three of them are currently being offered. Additional core courses will become available at the rate of one or two each year thereafter. It may be possible to offer group study opportunities in the future, depending on the number of students who may be interested in registering together and meeting regularly at a central location. 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 (4 credits)

Spch 0001C; or or Spch 1101; or Comm 1001; or Engl 1001

Core Requirements (26 credits)

- Chem 1004 General Principles of Chemistry or Applied Chemistry
- FPRO 0001C Introduction to Fire Protection**
- FPRO 0002C Hazardous Materials and Processes I**
- FPRO 0003C Hazardous Materials and Processes II**
- FPRO 0004C Fire Prevention** (available Fall 1974)
- FPRO 0005C Fire Protection and Life Safety Systems in Building Design** (available Fall 1974)
- FPRO 0006C Institutional and Industrial Fire Protection**
- FPRO 0007C Fire Department Administration** (available Fall 1974)

Spread Requirement (14 credits)

- Pol 1001 American Government and Politics
- Soc 1002 American Community or Soc 1001 Introduction to Sociology or Soc 5951 Minority Group Relations
- Psy 1001 General Psychology

foster care education certificate

(15 Credits)

The overall objective of this certificate program is to improve services to children in foster homes by increasing the competency and clarity of the role definition of foster parents. No effort is made to develop or transmit an "ideal" foster parent role, rather foster parents are expected to actively engage in efforts to develop a greater understanding of the stresses experienced by foster children and to clarify their own part in assisting foster children to cope with these stresses.

The program is planned primarily for foster parents who are or will be providing foster care to children or youth under auspices of a recognized social agency. Additionally, social workers working with foster parents are encouraged to register for the certificate courses but the number of social work enrollees in any course will be limited to 25 percent of the total class enrollment.

The program must be taken in its entirety at the University of Minnesota.

Each of the following courses will be for three quarter credits and should be taken in the order indicated:

- SW 0010C New Directions for Foster Parenthood
- SW 0011C Child and Adolescent Development
- SW 0012C Challenges to the Foster Child
- SW 0013C The Child and the Community
- SW 0020C (3 one-credit Special Topic Institutes)

For further information on this program and a listing of the quarterly offerings, write to the Department of Continuing Education in Social Work, 321 Nolte Center, University of Minnesota, Minneapolis, 55455; or call (612) 373-5831.

general studies certificate*

(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 on page 213.)

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 56.

human services certificate

(46 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 22-27 credits of core requirements, generic to all fields of human services and 3-8 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 staffs.

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 (22-27 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
- GC 3621 Counseling and Work Regarding Community Resources
- 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 in one of the following fields (16 credits):

- | | | |
|---------------------|------------------|--------------------------------|
| Education | Family Work | Day Care |
| Urban Problems | Welfare | Youth Care |
| Community Library | Family Nutrition | Minority Studies—American |
| Community Organizer | Community Health | Minority Studies—Afro-American |

Electives: Additional courses from the following areas to make a minimum of 46 credits total for the certificate.

- GC 1285 Cultural Anthropology or Anth 1002 Introduction to Anthropology: 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 3301 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:

In Fall Quarter 1973, most of the courses for the Interior Design Certificate were 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. See page 146 for old and new numbers.

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 Institute 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 16 credits at the University of Minnesota.

Core Requirement (45-48 credits):

Dsgn 1555 Interior Design I
Dsgn 1556 Interior Design II
Dsgn 3555 Seminar in Interior Design
Dsgn 3556 Seminar in Interior Design
Dsgn 1520 Use of Color
Dsgn 1528 *Layout for Interior Design* or ArtS 0003C Home Design and Planning
Dsgn 3577 Contract Design Seminar
Arth 1001 Introduction to the Visual Arts
ArtS 1119 Drafting: Basic Drafting Techniques
ArtS 1121 Perspective and Presentation Sketches
Comp 1001 Introductory Composition or Comm 1001 Communication or Comp 0004C Business Correspondence
Psy 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, French, Humanities, Literature
2. Ceramics, Drawing and Painting, Sculpture, Printmaking, Photography
3. Dsgn 1529 *Layout for Interior Design*
Dsgn 3578 Contract Design Seminar
ArtS 3136 Interior Design: Housing and the Urban Environment
ArtS 3135 Interior Design: Housing, Dynamics and Policy
Dsgn 3512 History of Traditional Furniture
Dsgn 3560-3561 Interior Design Clinic
4. Sal 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*

(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 fields:

Communication, Language, Symbolic Systems: composition (other than freshman English requirement) journalism, language, philosophy, mathematics, speech

Artistic Expression: art, architecture, classics, humanities, literature, music, theatre arts
Physical and Biological Sciences: astronomy, biology, chemistry, ecology, geology, physics

Man and Society: anthropology, economics, family studies, geography, history, political science, psychology, social science, sociology

Electives: Additional liberal arts courses to make a minimum of 45 credits total for the certificate. For a listing of courses under the spread requirement, students may call 373-3905 for a copy of CLA courses meeting the above Group Distribution requirements offered through Extension.

mathematics and science certificate*

(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

Mechanics and Materials

Physics

police administration certificate*

(46 credits)

The Police Administration Certificate program was planned by departments of Continuing Education and Extension in cooperation with the Public Administration Center and police administrators and other municipal officials. Increasing numbers of police officers are being selected from applicants with college

experience. The certificate provides an organized program of study, most of which can be transferred to a degree curriculum.

Some of the courses required in this certificate are available only through the Department of Independent Study of the University of Minnesota. The courses are marked with a double asterisk**.

English Requirement (8 credits):

Comp 1001-1002 or Comm 1001-1002 or Comp 1001- and 4 additional credits selected from Comp 1002, Engl 0008C**, Hum 1001, Hum 1002, Hum 1003, Hum 1004, Comp 0006C.

Core Requirement (16 credits):

Soc 3101 Elements of Criminology
PoAd 0015C** Methods in Police Supervision
PoAd 0016C** Methods of Criminal Procedure
PoAd 0017C** Methods of Police Planning, Management and Organization
PoAd 0018C** Methods of Criminal Investigation

Spread Requirement (22 credits):

Pol 1001 American Government and Politics
Psy 1001 General Psychology
Soc 1001 Introduction to Sociology

8 additional credits selected from:

Pol 1025 World Politics
Soc 5141 Delinquent Behavior
Hist 1301, 1302 American History

chemical dependency counseling certificate

(9 credits and 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 courses taken consecutively, 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 drug abuse and similar problems, including alcoholism and use of narcotics, hypnotics, tranquilizers, stimulants, and hallucinogens. While planned specifically for lay persons interested in lay 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 Review Committee. 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 Mr. Dennis A. Armstrong, Program Coordinator, Chemical Dependency Counseling Program, 5400 Powell Hall, University of Minnesota, Minneapolis, Minnesota 55455. An application blank will be sent to the applicant. Deadline for application for the Fall Quarter is August 15 and November 15 for the Winter Quarter.

No credits may be transferred to this program from other institutions, except for possible experience substitution on the internship, outlined above.

Requirements (9 credits and 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 3035 Internship in Alcohol and Drug Abuse
- PubH 5036 Group Counseling Techniques Related to Chemical Dependency Treatment (optional)

physicians assistant in ophthalmology certificate

The Physicians Assistant in Ophthalmology 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 physicians assistants in ophthalmology.

Requirement for the certificate will include completion of four special ophthalmology courses (totaling 30 credits), and one year of full time day attendance at St. Paul-Ramsey Hospital. In addition, a one-year externship will be required. Interested students wishing to receive more information about the program should write to: Program Director, Educational Study Association, 1575 University Avenue, St. Paul, Minnesota 55104.

social work certificate

(Personal Social Services Program)

The Personal Social Services Program (and Certificate) is designed for those persons with BA degrees currently or recently employed in social welfare agencies. Under certain conditions, such as extensive and current experience in the field as a volunteer, exceptions may be permitted in lieu of current employment. Requests for such exceptions must be made in writing to the Director of Continuing Education in Social Work. In order to complete the requirements of the Personal Social Services Program and receive a certificate, a sequential arrangement of courses must be satisfactorily completed within a period of two years (it is possible to complete the courses within one year).

A comprehensive brochure on the new program will have been mailed to interested agencies and individuals presently on the Department's mailing list in late July. **Any individuals interested in the Social Work program may obtain copies of that brochure, together with any additional information, by writing to the Department of Continuing Education in Social Work, 321 Nolte Center, University of Minnesota, Minneapolis, Minnesota 55455 or by calling (612) 373-5831.**

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 4-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

(53 credits)

Students transferring credits to this program from other institutions accredited by the University of Minnesota must take a minimum of 13 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 1141 Algebra, Probability and Pre-Calculus or equivalent	BFin 3000 Finance Fundamentals
Acct 1024-1025, 1026 Principles of Accounting	QA 1050 Elementary Managerial Statistics

senior accounting

(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	Four courses from the following:
Comp 1027 Advanced Writing	Econ 3101 Microeconomic Theory
Econ 1001, 1002 Principles of Economics	BA 3002 Business and Society
Math 1131 Finite Mathematics or Math 1141 Algebra, Probability and Pre-Calculus 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 3055 Introduction to Management Science
Acct 1024-1025, 1026 Principles of Accounting	Tran 3054 Fundamentals of Transportation
Acct 3105-3106, 3107 Intermediate Accounting	Mktg 3000 Principles of Marketing
Acct 3220-3221 Cost Accounting	Mgmt 3001 Fundamentals of Management
Three additional accounting courses numbered 5000 or above	Mgmt 3004 Business Policy: Strategy Formulation and Implementation
BFin 3000 Finance Fundamentals	MIS 3099 Elementary Fortran
BLaw 3058 Business Law	

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 4-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*

(46 credits)

This certificate, requiring the satisfactory completion of 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 at the University of Minnesota.

Prebusiness Requirement (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 1024-1025, 1026 Principles of
Accounting

Math 1131 Finite Mathematics or
Math 1141 Algebra, Probability, and
Pre-Calculus or equivalent

Core Requirement (12 credits) Three courses selected from the following:

Econ 3101 Microeconomic Theory

BA 3002 Business and Society

OAM 3055 Introduction to Management
Science

MIS 5100 Computers and Systems Design

IR 3002 Industrial Relations Systems

Ins 3100 Risk Management and Insurance

Trans 3054 Fundamentals of
Transportation

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

(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 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 at the University of Minnesota.

Prebusiness Requirement (39 credits):

Comp 1001-1002 Introductory Composition,
or Comm 1001-1002 Communication
or equivalent

Econ 1001, 1002 Principles of Economics

Acct 1024-1025, 1026 Principles of
Accounting

QA 1050 Elementary Managerial Statistics

Math 1141 Algebra, Probability, and Pre-
Calculus or equivalent

Math 1131 Finite Mathematics or

Math 1141 Algebra, Probability, and
Pre-Calculus or equivalent

Math 1142 Introduction to Calculus of
One and Several Variables

Core Requirement (24 credits): Six courses selected from the following:

OAM 3055 Introduction to Management Science	Tran 3054 Fundamentals of Transportation
MIS 5100 Computers and Systems Design	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
BLaw 3058 Business Law	
IR 3002 Industrial Relations Systems	
Ins 3100 Risk Management and Insurance	

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 91 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 pre-business degree requirements.

credit and financial management certificate

(62 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, Minnesota 55402, telephone 336-8356.

Core Requirement (54 credits):

Acct 1024 Principles of Accounting—General	BFin 0002C Credit and Financial Management Problems
Acct 1025 Principles of Accounting—Financial	Mgmt 3001 Fundamentals of Management
Acct 3160 Analysis of Financial Statements	Mktg 3000 Principles of Marketing
BLaw 3058-3078, 3088 Business Law	Mktg 0087C Credits and Collections
Econ 1001, 1002 Principles of Economics	Comp 0004C Business Correspondence
BFin 3000 Finance Fundamentals	Spch 0001C Beginning Speech—Communication

Electives (8 credits):

Acct 3105 Intermediate Accounting	*Mgmt 3003 Interpersonal Management Problems
Acct 3220 Cost Accounting	Mktg 3080 Industrial and Governmental Procurement
Econ 3751 Money and Banking	Tran 3054 Fundamentals of Transportation
BFin 3100 Financial Management	Comp 0003C Review of Business English
Ins 3100 Risk Management and Insurance	
Mgmt 3002 Psychology in Management	

* Students interested in the Fellow Award of the National Institute of Credit are advised that the course Mgmt 3003 Interpersonal Management Problems is required to qualify for the award.

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 professional training in the field of industrial relations and in the use of specialist techniques, and to assist industrial relations personnel to keep abreast of current developments in the profession. Training in this program is valuable in providing an entry into the profession, and completion of the certificate requirements may be regarded as an indication of technical competence in the field.

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 3010 Human Relations and Applied Organization Theory
IR 3002 Industrial Relations Systems: Labor Markets and the Management of Human Resources	Psy 1001 General Psychology
IR 3007 Collective Bargaining Negotiations and Modern Labor Relations	Psy 3801 Introduction to Statistical Methods
	Soc 1001 Introduction to Sociology

Elective (12 credits):

Econ 3501 Labor Economics	OAM 3055 Introduction to Management Science
Econ 5541 Contemporary Labor Issues	Psy 3011 Introduction to the Psychology of Learning
Econ 3551 Labor Economics	Psy 5501 Vocational Psychology
Econ 5537 Labor Market Behavior and Regulation	Soc 5201 Introduction to Social Psychology
Psy 3124 Psychology of Individual Differences	Soc 5411 Formal Organization
Psy 5044 Psychology of Motivation and Conflict	IR 0001C, 0002C, Supervision I, II
Econ 5534 Economic Security	IEOR 0100C Industrial Engineering and Management
Econ 5561 Economics of Collective Bargaining	IEOR 0210C Motion and Time Study
IR 3000 Topics in Industrial Relations	IEOR 0408C, 0409C Corporate Standard Data I, II
IR 0007C Occupational Safety and Health	Mgmt 3002 Psychology in Management
IR 8017 Union Government and Policies	
MIS 5100 Computers and Systems Design	

Information systems analysis and design certificate

(54 credits)

The Information Systems Analysis and Design Certificate program was developed by Continuing Education and Extension and the College of Business

Administration working cooperatively with Minnesota firms. The program is directed toward students either seeking careers in computer data processing or those already working in the field who wish to improve their skills. The course sequence is arranged so that it is applicable to individuals entering with a high school or vocational-technical school diploma, or to students who have already completed a Bachelor's Degree.

Starting with introductory computer programming courses, the certificate program works toward the development of sophisticated skills useful in the design of large scale computer-based management information systems. The Information Systems Analysis and Design Certificate program is structured to provide education and training that will open the way for advancement to a more responsible position in computer data 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.

Core Requirement (13 credits)

MIS 5100 Computers and Systems Design Acct 1024-1025, 1026 Principles of Accounting

Concentration Requirement (35 credits):

MIS 5101 Introduction to Management Information Systems	MIS 0140C Mathematical Foundations of Systems Analysis
MIS 5102 Introduction to Systems Analysis	MIS 0151C Administration and Control of Management Information Systems
MIS 5103 Data Structures and File Processing	Mgmt 3001 Fundamentals of Management
MIS 0131C Data Management Systems	
MIS 0132C Data Communication Systems	
QA 1050 Elementary Managerial Statistics	

Programming Requirement (6 credits):

MIS 3098 Elementary Cobol MIS 5098 Intermediate Cobol
MIS 3099 Elementary Fortran

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 addition to the certificates granted by Continuing Education and Extension on 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 Education Director, Administrative Management Society, 218 South 10th Street, Minneapolis, Minnesota 55403, telephone 339-0544.

associate in management of administrative services certificate

(46 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.

Core Requirement (42-43 credits):

Comp 0003C Review of Business English
or Comp 0004C Business Correspondence,
or Comp 1001 Introductory Composition,
or Comm 1001 Communication or equivalent
Econ 1001, 1002 Principles of Economics
Acct 1024-1025, 1026 Principles of Accounting

Math 1131 Finite Mathematics or
Math 1141 Algebra, Probability and
Pre-Calculus or equivalent
BLaw 3058 Business Law
MIS 5100 Basic Computer Systems
Psy 1001 General Psychology
Psy 3801 Introduction to Statistical
Methods

follow in management of administrative services certificate

(91 credits)

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.

Core Requirement (44-47 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 1024-1025, 1026 Principles of Accounting

BLaw 3058 Business Law
MIS 5100 Computers and Systems Design
Math 1131 Finite Mathematics or
Math 1141 Algebra, Probability, and
Pre-Calculus or equivalent
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 Industrial Relations Systems
Mgmt 3002 Psychology in Management
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 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:

- a. Engineers and scientists who formulate ideas and create new products and services.

- b. Engineering technicians who help develop, test, and apply these ideas and creations.
- c. 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 the student so that advisers can give effective counseling. This blank is available at any Extension office.

undergraduate development certificate in computer, information, and control sciences—45 credits

The initial Undergraduate Development Certificate in Computer, Information, and Control Sciences (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, Information and Control Sciences.

The UDC in Computer, Information, and Control Sciences—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	Comp 1001-1002	Introductory Composition or equivalent
Math 1211-1221-1231	Analysis I-II-III	CICS 3001	Perspectives on Computers and Society

Concentration Requirement (16 credits):

CICS 1100-1101	Introduction to Fortran Programming I-II or	CICS 1105-1106	Fundamentals of Algorithms and Languages I-II
CICS 3101	A Fortran Introduction to Computer Programming	CICS 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, information, and control sciences—90 credits

This certificate continues the development of the undergraduate core curriculum begun in the Undergraduate Development Certificate in Computer, Information, and Control Sciences—45 credits. The CICS 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 CICS 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 Computers, Information, and Control Sciences—45 credits.

Core Requirement (17 credits):

Math 3211	Analysis IV	Math 3091	Elementary Probability and Statistics with Applications
Math 3221	Introduction to Linear Algebra and Linear Differential Equation	CICS 5102	Structure and Programming of Software Systems II

Concentration Requirement (12 credits in one area):

AREA A

- CICS 5103 Introduction to Assemblers
- CICS 5503 Introduction to Compiler Construction
- CICS 5504 Formal Methods in Compiler Construction or
- CICS 5505 Optimization in Compilers

AREA B

- CICS 5121 Introduction to Data Structures
- CICS 5122 Advanced Data Structures
- Plus 4 additional credits relating to data structure

AREA C

- CICS 5400 Introduction to Automata Theory
- CICS 5401 Introduction to Formal Languages
- CICS 5501 Artificial Intelligence and Heuristic Programming

†† 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.

Related Technical Requirement (8 credits):

Courses chosen in this group should reflect areas in which the student sees 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, Information and Control Sciences.

undergraduate development certificate in engineering and science—45 credits

The UDC in Engineering and Science—45 credits is designed to provide the student with the fundamentals of mathematics, physics, and broad technical communications skills which will enable him to handle certain engineering support assignments in any engineering field and will give him the necessary background for more specialized or advanced study either as an engineer or as an engineering technician. 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		Composition or equivalent
	CICS 1100-1101 Introduction to Fortran		
	Programming I-II or CICS 1105		
	Introduction to Algorithm Languages I		

*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.

Electives: Courses from nontechnical electives†† to make a minimum of 45 credits for the certificate.

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 the technician who desires to widen and deepen his 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	EE 0070C	Engineering Employment
AEM 3036	Dynamics		
EE 1510	Elements of Electrical Engineering		

Electives: Courses from nontechnical or biological science electives††, or mathematics or chemistry or physics or Engl 3085 (IT) 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 1973-1975 IT 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	AEM 1015	Statics
Math 3221	Introduction to Linear Algebra and Linear Differential Equations or Math 1250 Calculus V	AEM 3016	Deformable Body Mechanics
Chem 1004-1005	General Principles of Chemistry	AEM 3036	Dynamics
Phys 1291-1295	General Physics and Laboratory	CE 3010	Data Analysis and Optimization in Civil Engineering
		CE 3400	Fluid Mechanics
		CE 3605	Introduction to Structural Analysis

Concentration Requirement (20 credits): Select courses from the list below in the fields desired.

- CE 3010 Data Analysis and Optimization in Civil Engineering (if not taken in core requirement)
- CE 3100 Surveying
- CE 3101 Photogrammetry
- CE 3102 Survey Design and Analysis
- 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
- CE 3605 Introduction to Structural Analysis (if not taken in core requirement)
- CE 5310 Foundation Engineering
- CE 5405 Hydrology

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 re-

sponsibility 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	EE 0070C	Engineering Employment
Math 3221	Introduction to Linear Algebra and Linear Differential Equations	Phys 1291-1295	General Physics and Laboratory
Math 3231	Vector Analysis	Third Year Electrical Engineering courses (3XXX-5XXX) (See Core Requirement courses on page 304)	
EE 1500-1501	Circuit Analysis or 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.

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	Engl 3085	Technical Writing for Engineers
EE 5050	Nonlinear Electronic Circuits	Math 3061	Operation Methods for Linear Systems
EE 3100	Electromagnetic Fields I	EE 0071C	Engineering Employment
EE 3101	Electromagnetic Fields II		
EE 5100	Electromagnetic Fields III		
EE 5000	Linear System Analysis		
EE 5001	Linear System Analysis		
EE 3010-3011-3012	Circuits, Signals and Systems		

††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 1973-1975 IT bulletin).

NOTE: Students working toward a degree should check with an IT 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 or Math 1250 Calculus V
Stat 3091 Probability and Statistics or
ME 3900 Introduction to Engineering Statistics
IEOR 0100C Industrial Engineering and Management
Engl 3085 Technical Writing for Engineers
Phys 1291-1295 General Physics and Laboratory

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

^{††}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 1973-1975 IT bulletin).

undergraduate development certificate in mechanical engineering—90 credits

(Includes 45 credits from Undergraduate Development Certificate in Engineering)

The Undergraduate Development Certificate in Mechanical Engineering—90 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 (38 credits):

- CICS 3101 A Fortran Introduction to Computer Programming
- Math 3221 Introduction to Linear Algebra and Linear Differential Equations
or Math 1250 Calculus V
- 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
- ME 3301 Thermodynamics
- ME 3303 Applied Thermodynamics

Electives: Additional electives from the following courses to make a minimum of 90 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.



accounting

accounting (Acct)

Your attention is called to the Accounting Certificate program; see page 81.

Michael Barrett, Associate Professor of Accounting
David Beckley, Senior Accountant, Haskins & Sells
James Bevacqua, Internal Auditor, Burlington Northern
John Cumming, Assistant Professor of Accounting
William Cummings, CPA, own practice
James Dodge, Assistant Controller, Northland Aluminum Products
Will Dombrowske, Treasurer, Assistant Secretary, Electric Machinery
William Duma, Vice President, First National Bank of St. Paul.
James Fisher, Manager of Financial Analysis and Reporting, General Mills
Edmund Gottlieb, Partner, Breitman, Orenstein & Schweitzer, CPAs
Jack Gray, Professor of Accounting
Herbert Ihle, Director, Control & Finance for Grocery Products, Pillsbury
Fred Jacobs, Assistant Professor of Accounting
Larry Kahler, Auditor, Peat, Marwick, Mitchell & Co.
Thomas Kaliher, CPA, own practice
Robert Katz, Partner, Alexander Grant & Co.
Roger Katzenmaier, Vice President, Wilkerson, Guthman & Johnson, CPAs
Willis Kerns, General Accounting Supervisor, Ford Motor Company
Joseph Kimmel, Director, Financial Planning, Oven Eze Foods, Pillsbury
Charles Ladd, Senior Consultant, Peat, Marwick, Mitchell & Co.
Dennis Mertz, Senior Accountant, Budget Analyst, Robert Engelhart & Co.
Peggie Parks, Auditor, Ernst & Ernst
Charles R. Purdy, Associate Professor of Accounting
Leon Radde, Manager of Corporate Audit, Investors Diversified Services
Leonard Rapoport, Partner, Alexander Grant & Co.
Donald Ricketts, Associate Professor of Accounting
Floyd Romslo, Assistant Professor, School of Public Health
Joe Toone, Manager, Federal Income Taxes, Bemis Company
Gary Witzman, Senior Accountant, Haskins & Sells
John Zehnder, International Financial Accountant, 3M Company
Robert K. Zimmer, Professor and coordinator of Accounting

S-N registration not permitted in Accounting unless specifically indicated in course description.

first year accounting courses

- Acct 1024 PRINCIPLES OF ACCOUNTING—GENERAL.** 3 degree credits, \$42. ★
Basic introductory accounting concepts and their use in evaluating economic activities. (No prereq)
- Acct 1025 PRINCIPLES OF ACCOUNTING—FINANCIAL.** 3 degree credits, \$42. ★
Elaborates on the recording, reporting, and interpreting of business events for investors and creditors. (Prereq 1024)
- Acct 1026 PRINCIPLES OF ACCOUNTING—MANAGERIAL.** 3 degree credits, \$42. ★
Covers the use of accounting as a tool for management decision-making. (Prereq 1024)

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, therefore, to continue with the second-year and advanced

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

accounting

accounting courses); (c) those who wish an introduction to the "language of business" as part of a liberal education. These courses are not for professional bookkeepers. Students may not transfer credits to regular day programs unless the entire sequence is completed in extension classes.

Persons with prior background or training may receive credit in one or more of these courses by passing an advanced standing examination. These examinations will be given at the following times in 632 Business Administration Building (West Bank):

Acct 1024 Wednesday, Sept. 4, 7 p.m.
Wednesday, Sept. 11, 7 p.m.
Wednesday, Dec. 11, 7 p.m.
Wednesday, Jan. 22, 7 p.m.
Wednesday, March 12, 7 p.m.

Acct 1025 Thursday, Sept. 5, 7 p.m.
Thursday, Sept. 12, 7 p.m.
Thursday, Dec. 12, 7 p.m.
Thursday, Jan. 23, 7 p.m.
Thursday, March 13, 7 p.m.

Acct 1026 Friday, Sept. 6, 7 p.m.
Friday, Sept. 13, 7 p.m.
Friday, Dec. 13, 7 p.m.
Friday, Jan. 24, 7 p.m.
Friday, March 14, 7 p.m.

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

The three courses are scheduled on three plans:

1. Regular semester class schedule for 3 credits each of three semesters for full first-year course.

For students who wish regular class periods in order to take two classes the same evening or who do not wish to spend the time necessary for the more concentrated scheduling.

2. Quarter basis, two 75-minute classes or one 2½-hour class each week, 3 credits each quarter, course completed in one year.

For students who wish to complete the entire sequence in one year of three quarters of 11 weeks each. Students who find this schedule too rapid may change to the semester basis at the end of the quarter. However, students may not transfer to the semester basis during the middle of a quarter.

3. Combined course, meeting twice weekly in 2½-hour sessions, Spring Semester only, one-year course covered in one semester.

For those who wish to concentrate on completion of the course Spring Semester in order to begin advanced courses in the following term.

Acct 0130C-0131C INCOME TAX ACCOUNTING. 3 certificate credits each semester (4 degree credits on completion of both courses consecutively). \$42 each semester.★

Principles involved in determining taxable net income and computation of federal and state income taxes for individuals, partnerships, and corporations. (Prereq 1026 for 0130C; 0130C for 0131C)

Fall Sem 0130C Sec 1 **M**—8:15-9:55, BlegH 250, Rapoport

Spring Sem 0131C Sec 2 **M**—8:15-9:55, BlegH 250, Rapoport

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

accounting

Acct 1024-1025, 1026 PRINCIPLES OF ACCOUNTING. 3 degree credits each term, \$4 each term.★

Methods of recording, reporting, and interpreting business events. Use of accounting as a tool of business management. (No prereq for 1024; 1025 for 1025 and 1026)

MINNEAPOLIS CAMPUS, WEST BANK

Fall Qtr 1024	Sec 1	TTh —5:30-6:45, BlegH 250	
	Sec 2	TTh —6:55-8:10, BlegH 250	
	Sec 3	S —9-11:30 a.m., BlegH 250	
Fall Sem 1024	Sec 4	T —6:20-8:00, BlegH 435	
	Sec 5	T —8:15-9:55, BlegH 420	
Fall Sem 1025	Sec 6	W —6:20-8:00, BlegH 220	
	Sec 7	W —8:15-9:55, BlegH 220	
Fall Sem 1026	Sec 8	M —6:20-8:00, BlegH 155	
	Sec 9	M —8:15-9:55, BlegH 155	
Winter Qtr 1025	Sec 10	TTh —5:30-6:45, BlegH 250	
	Sec 11	S —9-11:30 a.m., BlegH 250	
Spring Sem 1024	Sec 12	M —6:20-8:00, BlegH 120	
	Sec 13	M —8:15-9:55, BlegH 120	
	1025	Sec 14	W —6:20-8:00, BlegH 230
		Sec 15	W —8:15-9:55, BlegH 230
	1026	Sec 16	M —6:20-8:00, BlegH 225
		Sec 17	M —8:15-9:55, BlegH 225
	Spring Qtr 1024	Sec 18	TTh —5:30-6:45, BlegH 250
Sec 19		TTh —6:55-8:10, BlegH 250	
1026		Sec 20	TTh —6:30-7:45, BlegH 420
		Sec 21	S —9-11:30 a.m., BlegH 250

SANDBURG JUNIOR HIGH SCHOOL

Fall Qtr 1024	Sec 22	Th —7-9:30, Sand JHS 204
Winter Qtr 1025	Sec 23	Th —7-9:30, Sand JHS 204
Spring Qtr 1026	Sec 24	Th —7-9:30, Sand JHS 204

RICHFIELD SENIOR HIGH SCHOOL

Fall Qtr 1024	Sec 25	M —7-9:30, Rich HS 207
Winter Qtr 1025	Sec 26	M —7-9:30, Rich HS 207
Spring Qtr 1026	Sec 27	M —7-9:30, Rich HS 207

KELLOGG HIGH SCHOOL

Fall Qtr 1024	Sec 28	W —7-9:30, Kel HS 167-169
Winter Qtr 1025	Sec 29	W —7-9:30, Kel HS 167-169
Spring Qtr 1026	Sec 30	W —7-9:30, Kel HS 167-169

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

Acct 1024-1025-1026 PRINCIPLES OF ACCOUNTING.

(Offered through Continuing Education for Women; see page 173).

***Acct 1024-1025, 1026 PRINCIPLES OF ACCOUNTING (COMBINED).** 9 degree credits, \$126.

This course covers Acct 1024-1025, 1026 complete in one semester. (No prereq. Registrations will be accepted for the entire course only. Not recommended for people without accounting experience. Limited to 35 students)

Spring Sem Sec 31 **MTh**—6-8:30, BlegH 220

Acct 3105-3106, 3107 INTERMEDIATE ACCOUNTING. 3 degree credits each term, \$3160 for 3107. \$42 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 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. (Prereq 1025 and Econ 1001 and 1002 for 3105 [see page 99 for advanced standing examinations]; 3105 and Math 1141 or § for 3106; 3105 for 3107)

Fall Qtr 3105 Sec 1 **T**—6:30-9:00, Sand JHS 204 (Limit 35 students*)

Sec 2 **M**—6:30-9:00, Kel HS 229 (Limit 35 students*)

Fall Sem 3105 Sec 3 **W**—6:20-8:00, BlegH 255 (Limit 35 students*)

Sec 4 **W**—8:15-9:55, BlegH 255 (Limit 35 students*)

3107 Sec 5 **W**—6:20-8:00, BlegH 150

Winter Qtr 3106 Sec 6 **T**—6:30-9:00, BlegH 115 (Limit 35 students*)

Spring Sem 3106 Sec 7 **W**—6:20-8:00, BlegH 10

Spring Qtr 3107 Sec 8 **T**—6:30-9:00, BlegH 135

Acct 3160 ANALYSIS OF FINANCIAL STATEMENTS. 4 degree credits, \$3107. \$56.

Interpretation and analysis of financial statements for credit, investment, and managerial purposes. (Prereq 1026 or §. For nonaccounting majors)

Spring Sem Sec 1 **M**—6:20-8:50, BlegH 420

***Acct 3220-3221 COST ACCOUNTING.** 3 degree credits each semester, \$3255. \$42 each semester.

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. (Prereq 1026, Econ 1001 and 1002 and Math 1141 or § for 3220 [see page 99 for advanced standing examinations]; 3220 for 3221. Limited to 35 students)

Fall Sem 3220 Sec 1 **M**—6:20-8:00, BlegH 250

Sec 2 **M**—8:15-9:55, BlegH 220

Spring Sem 3221 Sec 3 **M**—6:20-8:00, BlegH 430

Sec 4 **M**—8:15-9:55, BlegH 340

Acct 5125 AUDITING PRINCIPLES AND PROCEDURES. 4 degree credits, \$60.

Verification of financial data, including consideration of auditing procedures and their application. Preparation of working papers and audit reports is emphasized. (Prereq 3107. May not be taken for graduate credit)

Fall Sem Sec 1 **T**—6:20-8:50, BlegH 430

Acct 5180 ADVANCED ACCOUNTING. 4 degree credits, \$60.

Consolidated statements, fiduciary and fund accounting, partnership accounting, foreign exchange. (Prereq 3107 or 3107. Qualified students may register for graduate credit at the University of Minnesota)

Spring Sem Sec 1 **W**—6:20-8:50, BlegH 145

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

accounting—adult psychiatry

***Acct 5270 REPORTING FOR MANAGEMENT CONTROL.** 4 degree credits, \$60.

Responsibility accounting; transfer pricing problems; capital budgeting; management control systems. Cases covering both profit and not for profit organizations. (Prereq 3220. Limited to 35 students. Qualified students may register for graduate credit at the University of Minnesota)

Fall Sem Sec 1 **W**—6:20-8:50, BlegH 340

Acct 5300 CURRENT TOPICS IN MANAGERIAL ACCOUNTING. 4 degree credits, \$60.

Modern internal auditing; development of audit programs, performance of computer audits and internal auditor's role in the overall management process. (Prereq 3220-3221 or 3201 and \$. May be repeated for credit. Qualified students may register for graduate credit at the University of Minnesota)

Spring Sem Sec 1 **M**—6:20-8:50, BlegH 404

adult psychiatry (AdPsy)

(Your attention is called to the Adult Psychiatry Certificate, page 74)

(See also Psychology and Social Work)

TRAINING PROGRAM FOR MENTAL HEALTH WORKERS

This is a 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 2 quarters beginning fall, 1974. The possibility of adding a third quarter to the program will be determined at a later point, and will be dependent on student interest.

The first course, AdPsy 0101C, will be offered Fall Quarter for 3 certificate credits. Tuition is \$45. The course is designed to provide students with an understanding of human growth and behavior in a continuum that ranges from normal to abnormal. Formal presentation will be followed by small group discussions. (Prereq \$. Limited to 75 students)

The second course, AdPsy 0102C, will be offered Winter Quarter for 3 certificate credits. Tuition is \$45. The course is designed to provide students with an understanding of a variety of theories of psychotherapy, such as behavior modification, transaction analysis, ego psychology, etc., and to the ways in which these may be applied to clinical practice. Formal presentations will be followed by small group discussions. (Prereq 0101C. Limited to 75 students)

The third course, AdPsy 0103C, if student interest warrants, will be offered Spring Quarter.

Faculty will be from the Minneapolis Clinic of Psychiatry and Neurology and the Metropolitan Medical Center. All classes will be held at the Metropolitan Medical Center, 900 South 8 Street, Minneapolis, Classroom D, Swedish School of Nursing. The classes will be held Tuesday afternoons from 3-6:00 p.m.

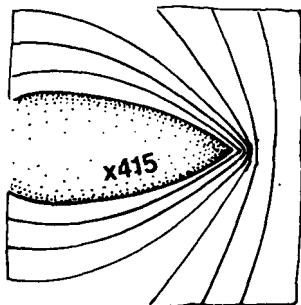
The program will be limited to 75 students. Preference will be given to those currently employed in the field of mental health.

Registration forms are available only through the Department of Continuing Education in Social Work, 321 Nolte Center for Continuing Education, University of Minnesota, Minneapolis, Minnesota 55455. To obtain registration forms, or any further registration information, write to the above address or call Jan Johnson at 373-5831.

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

aerospace engineering and mechanics (AEM)



(See also Professional Recognition Program (in Engineering and Science, page 194)

(For application of Commercial Pilot Program to AA degree, see page 58)

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

Gordon S. Beavers, Professor of Aerospace Engineering and Mechanics

Anders Christenson, Commercial Pilot—Single and Multi-Engine Land, Single Engine Sea, Instrument Rating, Flight Instructor—Airplanes and Instrument, F.A.A. Designated Pilot Examiner, and Advanced Ground Instructor

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

John P. Moran, Associate Professor of Aerospace Engineering and Mechanics

**ground school courses for air pilots—
general information**

The University's ground school courses are designed to prepare pilots or prospective pilots for the Federal Aviation Agency's written and oral examinations for certification as private pilots or commercial pilots.

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 0001C COMMERCIAL RATING GROUND SCHOOL. 2½ certificate credit. \$85.

To provide ground instruction for private pilots seeking F.A.A. certification as commercial pilots. Continuing Education and Extension offers this ground school program consisting of 40 hours of instruction over a 7-week period. Objectives of this course are to promote the trainees safe, proficient and economical operation of aircraft; and to prepare trainees for successful accomplishment of the F.A.A. written and oral examination prerequisite to their flight tests.

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aerospace engineering and mechanics—afro-american studies

Staff: Stewart Almleaf, coordinator for program, and instructor Anders Christenson, instructor of commercial pilot phase

Fall Qtr Sec 1 **TTh**—7:00-9:40, Aero 227, Christenson

AEM 3009 BASIC GROUND SCHOOL FOR PRIVATE PILOTS. 5 degree credits, \$70.

The course covers air navigation, radio aids, meteorology, flight theory, analysis of flight maneuvers, aircraft and engine operation. Federal Aviation regulations, air-craft 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 3 degree credits 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.

Registration can be accomplished at the campus or MacPhail Extension Classes offices.

Fall Qtr Sec 1 **TTh**—7-9:40, Aero 209, Almleaf

Sec 2 **TTh**—7-9:40, University Flight Facilities, Anoka County Airport, 2209 County Rd J

Winter Qtr Sec 3 **TTh**—7-9:40, Aero 209, Almleaf

Sec 4 **TTh**—7-9:40, University Flight Facilities, Anoka County Airport, 2209 County Rd J

Spring Qtr Sec 5 **TTh**—7-9:40, Aero 209, Almleaf

Sec 6 **TTh**—7-9:40, University Flight Facilities, Anoka County Airport, 2209 County Rd J

AEM 1015 STATICS. 4 degree credits, \$56.

Vector Algebra. Principles of statics. Application of the equations of equilibrium to the analysis of simple structures and machines. Statically determinate beams. Cables. Nature and influence of friction. (Prereq Math 1231; AEM 1015 may be substituted for AEM 3092)

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

AEM 3016 DEFORMABLE BODY MECHANICS. 4 degree credits, \$56. ★

Principles of statics; equilibrium conditions. Uniaxial loading and deformation. Stress and strain at a point. Material behavior; linear elasticity. Torsion. Bending of beams of symmetrical section. (Prereq mathematics through differential equations and linear algebra; AEM 3016 may be substituted for AEM 3093)

Spring Sem Sec 1 **W**—6:20-8:40, Aero 225, Moran

AEM 3036 DYNAMICS. 4 degree credits, \$Phys 5010 or 5020. \$56.

Review of particle dynamics. Mechanical systems and the rigid-body model. Equilibrium. Kinematics and dynamics of plane systems. Technical applications. (Prereq mathematics through differential equations and linear algebra)

Fall Qtr Sec 1 **W**—6-9:20, MechE 108, Garrard

afro-american studies (Afro)

Reginald Buckner, Instructor in Afro-American Studies and Music Education

Onwuchekwa Jemie, Associate Professor of English

Jason Orwenyo, Assistant Professor of Afro-American Studies

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

afro-american studies

Anna Stanley, Teaching Associate in Afro-American Studies

John Taborn, Associate Professor of Afro-American Studies

Anita Tucker, Assistant Professor of Afro-American Studies

Afro 1025 PERSONALITY OF BLACK PEOPLES. 4 degree credits, \$56. (◆ \$28).

This course will begin to give in-depth use to the development of the Black psyche, the Black person, and his culture. (No prereq)

Fall Qtr Sec 1 T—6:20-8:50, BlegH 245, Taborn

Spring Qtr Sec 2 T—6:20-8:50, BlegH 245, Taborn

Afro 1101-1102 LANGUAGE ARTS FROM A BLACK PERSPECTIVE. 4 degree credits each quarter, \$56 each quarter. (◆ \$28 each quarter)

1101: Personal consciousness in Black literature. **1102:** Social consciousness in Black literature. (No prereq for 1101; 1101 for 1102)

Fall Qtr 1101 Sec 1 Th—6:20-8:50, BlegH 430, Stanley

Winter Qtr 1102 Sec 2 Th—6:20-8:50, BlegH 430, Stanley

Afro 1301 MUSIC OF BLACKNESS. 4 degree credits, \$56. (◆ \$28).

Lectures, discussion, demonstration of Black music in America. (No prereq)

Spring Qtr Sec 1 T—5:30-8:00, BlegH 205, Buckner

(See also Mus 5711, American Popular Music)

Afro 3021-3022 AN INTRODUCTION TO AFRICAN STUDIES. 4 degree credits each quarter. \$56 each quarter. (◆ \$28 each quarter)

A multi-disciplinary study of diverse elements of African studies curriculum, both in content and methodology. **3021:** An overview in historical perspective and material content. **3022:** Trends and discussions in the present period. (No prereq for 3021; 3021 for 3022)

Fall Qtr 3021 Sec 1 T—6:20-8:50, BlegH 130, Orwenyo

Winter Qtr 3022 Sec 2 T—6:20-8:50, AndH 210, Orwenyo

Afro 3061-3062 BLACK FAMILY. 4 degree credits each quarter. \$56 each quarter. (◆ \$28).

3061: This course is about twenty-odd million citizens who make up approximately 10 percent of our population, a segment with a unique history. It will deal with the tracing of the movement and development of the institution of the Black Family up to the present time and will equip the student with an understanding of the chameleon-like qualities that exist. **3062:** This course will examine the contemporary Black Family, its strengths, as well as, its weaknesses. It will deal with the impact of the society on the family unit and in turn, the response of the family to its environment. Individual and personal development will be studied as it relates to the functioning of the family unit. (No prereq for 3061; 3061 for 3062)

Winter Qtr 3061 Sec 1 W—6:20-8:50, BlegH 430, Tucker

Spring Qtr 3062 Sec 2 W—6:20-8:50, BlegH 135, Tucker

Afro 3101 AFRO-AMERICAN LITERATURE. 4 degree credits, \$56. (◆ \$28)

A survey of Afro-American prose, poetry and drama to 1939. From slave narratives and folklore to the end of the Harlem Renaissance. (No prereq)

Fall Qtr Sec 1 W—6:20-8:50, BlegH 240, Jemie

At the time of bulletin printing, University of Minnesota credits (4) were being sought for the following New York University Sunrise Semester television course, seen locally at 6:30-7:00 a.m., Mon., Wed., and Fri., on WCCO-TV, Channel 4, beginning Sept. 23. Inquire at time of registration (373-3195).

AFRICAN CIVILIZATION

An exploration into selected African civilizations, ancient and modern, and their cultural, political, economic, legal and religious traditions. Lectures are complemented with films, tapes and artifacts from the professor's collection.

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agricultural education—american studies

agricultural education

(See Vocational Education)

air pollution

(See Public Health)

american indian studies (Amln)

(See also Anth 3211, Indians of North America)

Roger Buffalohead, Assistant or of American Indian Studies

Amln 1101, 1102 AMERICAN INDIAN HISTORY: A SURVEY. 4 degree credits each quarter, \$56 each quarter. ★1101 (♦\$28 each quarter)

Indian history with emphasis upon pluralistic beginnings, Indian-white contacts, the impact of federal Indian policy, and persistence and change in American Indian cultures. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 61])

Fall Qtr 1101 Sec 1 T—6:20-8:50, BlegH 360

Winter Qtr 1102 Sec 2 T—6:20-8:50, BlegH 360

Amln 3061 AMERICAN INDIANS IN THE MODERN WORLD. 4 degree credits, \$56. (♦\$28).

Brief review of the history of Indian-White contacts. Impact of federal policy on American Indians. Adaptation of American Indian cultures to contemporary social conditions. (Prereq Anth 1002 or Amln 1101, 1102 or \$ May be applied to the CLA foreign language requirement, Route II [see page 61])

Spring Qtr Sec 1 W—6:20-8:50, BlegH 360

american studies (AmSt)

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

(See also Humanities (CLA); Humanities (GC); History; and Continuing Education for Women (page 000))

William H. Agee, Lecturer in American Studies

AmSt 1101 AMERICAN LIFE. 4 degree credits, \$3111. \$56. ★ (♦\$28)

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 W—6:30-9:00, Ph 145, Agee

Sec 2 M—6:30-9:00, Rich HS 220, Agee (Limit 30 students*)

Winter Qtr Sec 3 Th—6:30-9:00, MainE 305

***AmSt 1101 AMERICAN LIFE.** 4 degree credits, \$56.

Part of an integrated series "Values in Transition: an Examination of Forces Acting on the Individual in Modern America." (See page 192). Success in modern America. Reform and the welfare state. The struggle to meet human needs in a complex society. If credit already received for this course, student may register for extra credit (see Extra Credit "X" Registration, page 192). (Prereq concurrent registration in Hist 1310. Meets concurrently with *AmSt 3111. Limited to 50 students)

Fall Sem Sec 4 T—6:20-8:00, MechE 221, Agee

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

american studies

AmSt 1102 AMERICAN LIFE. 4 degree credits, \$3112. \$56. ★ (◆\$28)

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)

Winter Qtr Sec 1 W—6:30-9:00, Ph 145, Agee
 Sec 2 M—6:30-9:00, Rich HS 220, Agee
Spring Qtr Sec 3 Th—6:30-9:00, Ph 145

***AmSt 1102 AMERICAN LIFE.** 4 degree credits, \$56.

Part of an integrated series "Values in Transition: an Examination of Forces Acting on the Individual in Modern America." (See page 192). Community or conformity? The struggle for individual autonomy in an increasingly collectivized society. Perspectives on contemporary America—conflicting views of the American present and future. If credit already received for this course, student may register for extra credit (see Extra Credit "X" Registration, page 46). (Prereq concurrent registration in Soc 1002. Meets concurrently with *AmSt 3112. Students registered in Fall Sem part of series will be given registration priority. Limited to 50 students)

Spring Sem Sec 4 T—6:20-8:00, MechE 221, Agee

AmSt 1103 AMERICAN LIFE. 4 degree credits, \$3113. \$56. (◆\$28)

Two topics are investigated: (a) American attitudes toward the environment (nature, the city, and the machine). Readings from Jefferson, Crevecoeur, Mark Twain, and Poole. The natural and urban-technological landscapes in painting. The rise of the skyscraper. The architecture of Frank Lloyd Wright. (b) The image of himself and his society held by the modern Afro-American. Readings from Washington, Ellison, King, Carmichael, and Cleaver. The development of jazz. Folk songs and the humor of protest. (No prereq. Meets concurrently with 3113)

Fall Qtr Sec 1 Th—6:30-9:00, Ph 145
Spring Qtr Sec 2 W—6:30-9:00, Ph 145, Agee
 Sec 3 M—6:30-9:00, Rich HS 220, Agee

AmSt 3111 INTRODUCTION TO AMERICAN CIVILIZATION. 4 degree credits, \$1101. \$56.
 See course description for AmSt 1101. (Additional work required for 3111) (No prereq. Meets concurrently with 1101)

Fall Qtr Sec 1 W—6:30-9:00, MainE 305, Agee
 Sec 2 M—6:30-9:00, Rich HS 220, Agee (Limit 30 students*)
Winter Qtr Sec 3 Th—6:30-9:00, MainE 305

***AmSt 3111 INTRODUCTION TO AMERICAN CIVILIZATION.** 4 degree credits, \$56.

Part of an integrated series "Values in Transition: an Examination of Forces Acting on the Individual in Modern America." (See page 192). See description for *AmSt 1101. If credit already received for this course, student may register for extra credit (see Extra Credit "X" Registration, page 46). (Prereq concurrent registration in Hist 1310. Meets concurrently with *AmSt 1101. Limited to 50 students)

Fall Sem Sec 4 T—6:20-8:00, MechE 221, Agee

AmSt 3112 INTRODUCTION TO AMERICAN CIVILIZATION. 4 degree credits, \$1102. \$56.
 See description for AmSt 1102. (Additional work required for 3112.) (No prereq. Meets concurrently with 1102)

Winter Qtr Sec 1 W—6:30-9:00, MainE 305, Agee
 Sec 2 M—6:30-9:00, Rich HS 220, Agee
Spring Qtr Sec 3 Th—6:30-9:00, MainE 305

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

american studies—atomy

***AmSt 3112 INTRODUCTION TO AMERICAN CIVILIZATION.** 4 degree credits, \$56.

Part of an integrated series "Values in Transition: an Examination of Forces Acting on Individual in Modern America." (See page 192). See description for *AmSt 1102. If credit already received for this course, student may register for extra credit (see Extra Credit "X" Registration, page 46). (Prereq concurrent registration in Soc 1002. Meets concurrently with *AmSt 1102. Students registered in Fall Sem part of series will be given registration priority. Limited to 50 students)

Spring Sem Sec 4 T—6:20-8:00, MechE 221, Agee

AmSt 3113 INTRODUCTION TO AMERICAN CIVILIZATION. 4 degree credits, \$1103. \$56.

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

Fall Qtr Sec 1 Th—6:30-9:00, MainE 305

Spring Qtr Sec 2 W—6:30-9:00, MainE 305, Agee

Sec 3 M—6:30-9:00, Rich HS 220, Agee

AmSt 3301 PROSEMINAR: AMERICAN STUDIES. 4 degree credits, \$56.

Versions of the American Dream I: The Culture of the Age of Enterprise (1865-1900). Readings from several authors including Adams, Whitman, Howells, Dreiser, and Mumford. Visual arts and architecture. (Students will present viewpoints on the materials which will then be discussed by the participants in the seminar.) (Prereq 1101, 1102, 1103, or 3111, 3112, 3113 or several courses in American history literature, art, or social science, or \$.)

Fall Qtr Sec 1 Th—6:30-9:00, MainE 303, Agee

AmSt 3302 PROSEMINAR: AMERICAN STUDIES. 4 degree credits, \$56.

Versions of the American Dream II: After the Crash—the Culture of the Great Depression. Not a formal "history" but an examination of some images of American society during the 1930's. 1920's background. FDR and the New Deal. Literature, the visual arts, popular and folk music. The coming of World War II. Writers include Allen, Steinbeck, Dos Passos, and West. (Students will present viewpoints on the materials which will then be discussed by the participants in the seminar.) (Prereq 1101, 1102, 1103 or 3111, 3112, 3113, or several courses in American history, literature, art or social science, or \$.)

Winter Qtr Sec 1 Th—6:30-9:00, MainE 303, Agee

AmSt 3303 PROSEMINAR: AMERICAN STUDIES. 4 degree credits, \$56.

Versions of the American Dream III: Postwar Culture. Social criticism, literature, the arts, and popular culture during the period 1945-60. Writers include Goldman, Mailer, Wakefield, Salinger, Kerouac, Riesman, Fromm. Humor: Sahl, Lehrer. (Students will present viewpoints on the materials which will then be discussed by the participants in the seminar.) (Prereq 1101, 1102, 1103, or 3111, 3112, 3113, or several courses in American history, literature, art, or social science, or \$.)

Spring Qtr Sec 1 Th—6:30-9:00, MainE 303, Agee

AmSt 5201-5202-5203 WOMAN IN AMERICA.

(Offered through Continuing Education for Women; see page 173)

AmSt 5401-5402-5403 IDEAS IN AMERICA.

(Offered through Continuing Education for Women; see page 173)

anatomy (Anat)

(See also Physical Medicine and Rehabilitation)

James F. Pohtilla, Associate Professor of Physical Medicine and Rehabilitation

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

anatomy—anthropology

*Anat 0058 **ANATOMY OF THE EXTREMITIES.** No credit. \$42 plus \$8 course fee. Total \$50.

A review of the gross anatomy of the joint structures, muscular, peripheral nervous and circulatory systems. Lecture and laboratory will include demonstration and 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—6:20-9:00, ChRC 208, Pohtilla

anthropology (Anth)

Christy Caine, Instructor in Anthropology
Joseph W. Frees, Instructor in Anthropology
Walter Funmaker, Instructor in Anthropology
Jennette Jones, Instructor in Anthropology
William L. Rowe, Professor of Anthropology
Paul Schaefer, Instructor in Anthropology
Monicka Vizedom, Assistant Professor of Anthropology

Anth 1002 INTRODUCTION TO ANTHROPOLOGY: CULTURAL ANTHROPOLOGY. 5 degree credits, \$70. (◆\$35)★

Origin of man and development of human cultures from earliest times to present. Varieties and range of human behavior as revealed through comparative study of cultures in all parts of the world. (No prereq)

Fall Sem Sec 1 W—6:20-8:50, ForH 155, Schaefer

Sec 2 M—7-9:30, Mtka HS 119, Frees

Spring Sem Sec 3 M—6:20-8:50, ForH 155, Frees

Anth 3131 RELIGION AND CULTURE. 5 degree credits, \$70 (◆\$35)

Introduction to comparative study of religion in its cultural context. (Prereq 1002; no cr for majors)

Spring Sem Sec 1 W—6:20-8:50, ForH 285, Jones

(See other courses relating to religion, page 181)

Anth 3211 INDIANS OF NORTH AMERICA. 5 degree credits, \$70 (◆\$35)★

Aboriginal cultures of North America. Effects of culture contact. Contemporary problems of Indian reservations and communities. (Prereq 1002. May be applied to the CLA foreign language requirement, Route II [see page 61])

Spring Sem Sec 1 Th—6:20-8:50, ForH 55, Funmaker

(See also American Indian Studies)

Anth 3501 PRINCIPLES OF BIO-CULTURAL EVOLUTION. 5 degree credits, \$70 (◆\$35)

Introduction to evidence and interpretative structures for human biological and cultural evolution. Emphasis on evolutionary theory, fossil record, evidence for ongoing evolution, and selected archaeological cultural sequences. Required together with 3502 of prospective majors in anthropology. (Prereq 1002 or §)

Fall Sem Sec 1 T—6:20-8:50, ForH 55, Caine

Anth 5141 CULTURE AND PERSONALITY. 5 degree credits, \$75. (◆\$37.50) ★

Role of culture in formation of personality. Problems of individual adjustments to demands of culture. Psychological approach to culture. (Prereq 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)

Fall Sem Sec 1 Th—6:20-8:50, ForH 55, Rowe

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

anthropology—architecture

Anth 5153 URBAN ANTHROPOLOGY. 5 degree credits, \$75 (♦\$37.50)

Structure and process in non-Western urban centers; emphasis on the role of rural migrants, relationship of urbanism to political and economic development, role of voluntary associations, adjustment of kinship groups to urban life. (Prereq 1002 or †. Qualified students may register for graduate credit at the University of Minnesota)

Fall Sem Sec 1 T—6:20-8:50, ForH 155, Vizedom

Anth 5261 INDIAN CULTURE AND SOCIETY. 5 degree credits, \$75 (♦\$37.50)

Survey of tribes, caste, and culture history in South Asia. Cultural influences from India in Southeast Asia. (Prereq 3502 or †. Qualified students may register for graduate credit at the University of Minnesota)

Spring Sem Sec 1 T—6:20-8:50, ForH 150, Rowe

arabic

(See Middle Eastern Languages)

archaeology

(See Anthropology and Classics)

architecture (Arch)

(See also Landscape Architecture; Art History; and GC 1311, General Arts [Humanities])

Dennis Holloway, Assistant Professor of Architecture

John S. Myers, Professor of Architecture

George Winterowd, Professor of Architecture

Arch 0024 REFRESHER COURSE IN ARCHITECTURAL DESIGN AND SITE PLANNING. No credit, \$56.

A review of basic design principles for candidates for the State Board examinations. (No prereq)

Fall Qtr Sec 1 Th—4-6:00, Arch 15, Myers

Arch 1001-1002-1003 ENVIRONMENTAL DESIGN. 4 degree credits each quarter, \$56 plus \$2 special fee. **Total \$58 each quarter.**

1001: Exploration of interaction of man and his environment using the disciplines of natural and social sciences and the arts as resource background for readings, lecture, discussion and workshop sessions. **1002:** Examination of the nature and effects of various tools and processes of environmental change ranging from buildings and landscape to economic policies, climate, and myths, readings, lectures, discussion and workshop sessions. **1003:** Design and building projects, discussion, and readings exploring personal abilities to implement and evaluate environmental change. (No prereq for 1001; 1001 for 1002; 1002 for 1003)

Fall Qtr 1001 Sec 1 T—6:20-10:20, Arch 125, Holloway

Winter Qtr 1002 Sec 2 T—6:20-10:20, Arch 125, Holloway

Spring Qtr 1003 Sec 3 Time arr.

(See other environmental courses, page 171)

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

architecture—art education

Arch 1021 HISTORY OF ENVIRONMENTAL DEVELOPMENT: ARCHITECTURE. 4 degree credits, \$56. (◆ \$28)

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, 3051 through 3056. May be used as a refresher course for the State Board Examination)

Fall Qtr Sec 1 T—6:20-8:50, Arch 35, Winterowd

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

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

Arch 3081-3082-3083 ARCHITECTURAL DESIGN. 6 degree credits per quarter, \$84 per 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 IT students, junior for CLA students; and admission to the School of Architecture as a candidate for the Bachelor of Arts in Architecture. Courses meet concurrently)

Fall Qtr 3081 Sec 1 MW—6:20-10:00, Arch 55

Winter Qtr 3081 Sec 2 MW—6:20-10:00, Arch 55

3082 Sec 3 MW—6:20-10:00, Arch 55

Spring Qtr 3081 Sec 4 MW—6:20-10:00, Arch 55

3082 Sec 5 MW—6:20-10:00, Arch 55

3083 Sec 6 MW—6:20-10:00, Arch 55

Arch 5056 MODERN ARCHITECTURE. 4 degree credits, \$60.

History of development of architecture and urban design from early 19th century sources in Europe and America until the present time. (Prereq 1021. Qualified students may register for graduate credit at the University of Minnesota)

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

Arch 5970 DIRECTED STUDY. Credits arranged. Subject matter arranged.

Contact Prof. George Winterowd, 110c Arch, University of Minnesota, Minneapolis, Minnesota 55455 (373-2198). (See page 188)

Time arr.

art education (ArEd)

(See also Education)

Mary Hiniker, Instructor in Art Education

Roberta Krømer, Instructor in Art Education

George K. Olson, Assistant Professor of Art Education

Robert J. Rice, Instructor in Art Education

Anna Smits, Instructor in Art Education

S-N registration not permitted in Art Education unless specifically indicated in course description.

ArEd 1207 EXPERIENCE WITH PICTORIAL EXPRESSION. 3 degree credits, \$42 plus \$2 course fee. Total \$44.

Materials, techniques and ideas important in art expression; relationship between adult expression, child expression and art history. (No prereq)

Fall Qtr Sec 1 T—6:20-8:50, WuH 240, Hiniker

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

art education

ArEd 1208 EXPERIENCES WITH DESIGN, MATERIALS. 3 degree credits, \$42 plus \$2 course fee. **Total \$44.**

Projects in invention, arrangement and decoration, color, lettering, posters, bulletin board displays. (No prereq)

Winter Qtr Sec 1 **T—6:20-8:50, WuH 240, Hiniker**

ArEd 3001 SURVEY OF ART ACTIVITIES. 4 degree credits, \$56.

Introduction to pictorial expression, design and the function of art in the social environment. Not open to Art Education majors. (No prereq)

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

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

***ArEd 3009 WEAVING WITHOUT A LOOM.** 4 degree credits, \$56.

Developing fundamental weaving skills employing inexpensive equipment and techniques without use of the floor loom. (No prereq. Limited to 30 students)

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

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

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

***ArEd 3020 CONTEMPORARY CRAFTS.** 3 degree credits, \$42 plus \$5 course fee. **Total \$47.**

Materials, equipment, design criteria, and techniques for textile, wood, metal and ceramics. (No prereq. Limited to 25 students)

Fall Qtr Sec 1 **T—6:20-8:50, WuH 210, Kremer**

***ArEd 3030 PUPPETRY.** 3 degree credits, \$42.

Construction, manipulation, and stage technique for basic puppet types. (No prereq. Limited to 30 students)

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

***ArEd 5001 ART MEDIA TECHNIQUES.** 1 degree credit this offering (maximum 12 cr) \$15, plus \$2 course fee. **Total \$17.**

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 bookbinding—hard-cover and Japanese types.**) (No prereq. Limited to 30 students. Qualified students may register for graduate credit at the University of Minnesota)

SpTerm Sec 1 **Oct. 26, 10 a.m.-12:30, 1-3:30 p.m.,**

Nov. 2, 10 a.m.-12:30, 1-3:30 p.m., WuH 120, Olson

***ArEd 5001 ART MEDIA TECHNIQUES.** 1 degree credit (maximum 12 cr) \$15, plus \$2 course fee. **Total \$17.**

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 textile design with emphasis on batik and tie-dying.**) (No prereq. Limited to 30 students. Qualified students may register for graduate credit at the University of Minnesota)

SpTerm Sec 2 **April 5, 10 a.m.-12:30, 1-3:30 p.m.,**

April 12, 10 a.m.-12:30, 1-3:30 p.m., WuH 120, Rice

Workshops in Art Education

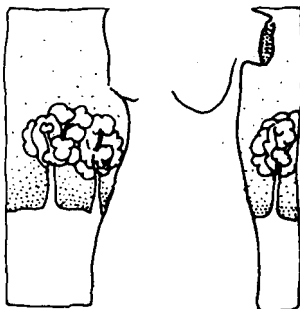
A variety of topics in art education are available to teachers throughout the state. Many of these are offered as two or three-day workshops—**ArEd 5001 ART MEDIA TECHNIQUES**—focusing on a variety of topics. Topics such as the following will be offered through this course:

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

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 (Arth)



Frederick Cooper, Associate Professor of Art History

Robert Poor, Associate Professor of Art History

M. Alison Stones, Assistant Professor of Art History

Michael Stoughton, Assistant Professor of Art History

Donald R. Torbert, Professor of Art History

Melvin Waldfoegel, Professor of Art History

Arth 1001 INTRODUCTION TO THE VISUAL ARTS. 4 degree credits, \$3001. \$56 plus \$3 course fee. **Total \$59.** (♦ \$28 plus \$3 course fee. Total \$31.)

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 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, Torbert

Winter Qtr Sec 2 T—6:20-8:50, Jones 207B, Torbert

(See also Phil 3502, Introduction to Aesthetics)

(See also Architecture; GC 1311, General Arts [Humanities]; and History)

Arth 1015 INTRODUCTION TO WESTERN ART. 4 degree credits. \$56 plus \$3 course fee. **Total \$59.** (♦ \$28 plus \$3 course fee. Total \$31)

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 Sem Sec 1 M—6:20-8:00, Arch 25, Waldfoegel

Spring Sem Sec 2 M—6:20-8:00, Arch 25, Waldfoegel

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

art history

Arth 3001 INTRODUCTION TO VISUAL ARTS. 4 degree credits, \$1001. \$56 plus \$3 course fee. **Total \$59.**

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

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

Winter Qtr Sec 2 T—6:20-8:50, Jones 207B, Torbert

Arth 3008 HISTORY OF ANCIENT ART. 4 degree credits, \$1008. \$56 plus \$3 course fee. **Total \$59.** (♦ \$28 plus \$3 course fee. Total \$31.)

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

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

Arth 3009 HISTORY OF MEDIEVAL ART. 4 degree credits, \$56 plus \$3 course fee. **Total \$59.** (♦\$28 plus \$3 course fee. Total \$31)

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

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

Arth 3011 HISTORY OF RENAISSANCE AND BAROQUE ART. 4 degree credits, \$56 plus \$3 course fee. **Total \$59.** (♦\$28 plus \$3 course fee. Total \$31)

The major monuments in architecture, sculpture, and painting from the early 14th century through the Baroque. (No prereq)

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

Arth 3012 HISTORY OF 19th AND 20th CENTURY ART. 4 degree credits, \$56 plus \$3 course fee. **Total \$59.** (♦\$28 plus \$3 course fee. Total \$31)

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

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

Arth 3013 INTRODUCTION TO FAR EASTERN ART. 4 degree credits, \$56 plus \$3 course fee. **Total \$59.** (♦\$28 plus \$3 course fee. Total \$31)

Selected major themes within broad context of Far Eastern art. The arts of China and Japan (not an inclusive historical survey). (No prereq)

Winter Qtr Sec 1 T—6:20-8:50, Jones 207B, Poor

Arth 3303 BAROQUE AND ROCOCO PAINTING IN FRANCE. 4 degree credits, \$5357, \$56 plus \$3 course fee. **Total \$59.** (♦ \$28 plus \$3 course fee. Total \$31)

A survey of French painting of the 17th and first half of the 18th centuries. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 61])

Fall Qtr Sec 1 W—6:20-8:50, Jones 207A, Stoughton

Arth 3467 MODERN ART. 4 degree credits, \$56 plus \$3 course fee. **Total \$59.** (♦ \$28 plus \$3 course fee. Total \$31)

Major directions in late 19th and 20th century art in all media. Includes the influence of advertising mass media and advanced technology on the development of modern art. (No prereq)

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

Arth 5346 BAROQUE ART IN ITALY AND SPAIN. 4 degree credits, \$60 plus \$3 course fee. **Total \$63.** (♦\$30 plus \$3 course fee. Total \$33)

Italian sculpture, painting and architecture, and Spanish painting of the

See symbols, page 33.

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art history—art, studio

17th century. (Prereq 3011, graduate or §. Qualified students may register for graduate credit at the University of Minnesota)

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

ArtH 5547 MODERN AMERICAN AND EUROPEAN ARCHITECTURE. 4 degree credits, \$60 plus \$3 course fee. **Total \$63.** (♦\$30 plus \$3 course fee. Total \$33)

Modern architecture on the international scene; its influence on work in U.S. (Sullivan, Wright, Behrens, Gropius, Mies, LeCorbusier, Perret, Saarinen, Brewer, Nervi, Torroja, Candela, etc.). (Prereq senior, grad or §. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 W—6:20-8:50, Jones 207B, Torbert

ArtH 5765 EARLY CHINESE ART. 5 degree credits, \$75 plus \$3 course fee. **Total \$78.** (♦\$37.50 plus \$3 course fee. Total \$40.50)

Ancient ceramics and ritual bronzes; early Buddhist sculpture and Chinese painting. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 61]. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 T—6:20-9:30, Jones 207A, Poor

ArtH 5769 CONNOISSEURSHIP IN ORIENTAL ART. 5 degree credits, \$3769. \$75 plus \$3 course fee. **Total \$78.** (♦\$37.50 plus \$3 course fee. Total \$40.50)

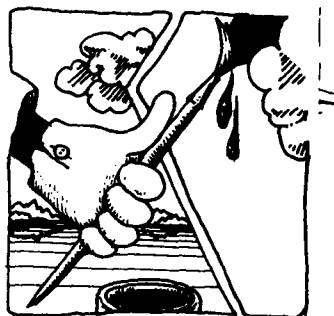
Direct examination of oriental art objects in local collections. (Prereq §. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 T—6:20-9:30, Jones 207B, Poor

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, 320 Westbrook Hall, University of Minnesota, Minneapolis, Minnesota 55455; telephone 373-5147.

art, studio (ArtS)



See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

art, studio

Guy Baldwin, Assistant Professor of Art
Karl Bethke, Associate Professor of Art
Ralph Brown, Lecturer in Art
Peter Busa, Professor of Art
Victor Caglioti, Assistant Professor of Art
Thomas Cowette, Assistant Professor of Art
Alexander Dekker, Lecturer in Interior Design
Allen Downs, Professor of Art
David L. Feinberg, Assistant Professor of Art
Benjamin A. Gingold, Jr., Lecturer in Art
Gary Hallman, Assistant Professor of Art
Raymond Hendler, Professor of Art
David H. Hozza, Lecturer in Art
Donald Jardine, Lecturer in Art
George Morrison, Professor of Art
Malcolm Myers, Professor of Art
Wayne Potratz, Assistant Professor of Art
Zigmunds Priede, Professor of Art
Eleanor Quirt, 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
Saul Warkov, Assistant Professor of 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. The Department of Studio Arts may be able to accommodate those students who place their names on a list requesting the opening of an additional section. Telephone: 373-3663. Advanced standing credit will be granted in special cases for work done elsewhere—consult the chairman of the department; telephone 373-3663.

Arts 1401 INTRODUCTION TO STUDIO ART. (replaces Arts 1103), 4 degree credits, \$56. (♦\$28)

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**—6-9:45, AudCB 125, Hendler

Winter Qtr Sec 2 **Th**—6-9:45, AudCB 125, Hendler

Spring Qtr Sec 3 **Th**—6-9:45, AudCB 125, Hendler

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

***Arts 0001C COLOR PHOTOGRAPHY I.** 3 certificate credits, \$42 plus \$10 course fee. **Total \$52.**

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; and (b) supervised camera assignments in the studio and on outdoor field trips. (No prereq. Limited to 30 students)

Fall Sem Sec 1 **T**—6-7:40, AgEng 109, StP Campus, Webb
 Sec 2 **T**—8:15-9:55, AgEng 109, StP Campus, Webb
Spring Sem Sec 3 **T**—6-7:40, AgEng 109, StP Campus, Webb

***Arts 0002C COLOR PHOTOGRAPHY II.** 3 certificate credits, \$42 plus \$10 course fee. **Total \$52.**

A workshop course in which the student participates in supervised photographic projects. Course includes lecture demonstrations, field trips, and attention to such subjects as color portraiture, color experiments, color printing, and special problems. (Prereq 0001C or \dagger . Limited to 30 students)

Spring Sem Sec 1 **T**—8:15-9:55, AgEng 109, StP Campus, Webb

(See also Phys 3801, Introduction to the Physics of Photography)

Arts 0003C HOME DESIGN AND PLANNING. 3 certificate credits, \$42 plus \$1 course fee. **Total \$43.**

Basic principles and elements of residential environment design and planning. Design criteria, values, and methods. Techniques of programming, plan drawing, architectural criticism. 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 planning technique. Relationship of the professions of architecture, building contracting, and real estate to the functional, aesthetic, and technological components of residential environment. (No prereq)

Fall Qtr Sec 1 **Th**—6:20-8:50, Arch 40, Gingold

***Arts 1101 BASIC DRAWING.** 4 degree credits, \$56 plus \$5 course fee. **Total \$61.**

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)

Fall Qtr Sec 1 **M**—6-9:45, ArtB 140, Hendler
 Sec 2 **M**—6-9:45, Kel HS 200, Quirt
 Sec 3 **M**—6-9:45, ArtB 150, Busa
 Sec 4 **T**—6-9:45, ArtB 140, Caglioti
 Sec 5 **T**—6-9:45, ArtB 161, Feinberg
 Sec 6 **W**—6-9:45, ArtB 150, Priede
Winter Qtr Sec 7 **M**—6-9:45, Sand JHS 118, Quirt
 Sec 8 **T**—6-9:45, ArtB 140, Caglioti
 Sec 9 **W**—6-9:45, ArtB 141, Busa
 Sec 10 **W**—6-9:45, ArtB 160, Hendler
 Sec 11 **S**—8:30 a.m.-12:15, ArtB 141, Priede
Spring Qtr Sec 12 **M**—6:30-10:15, Mtka HS 125, Quirt
 Sec 13 **M**—6-9:45, ArtB 150, Somberg
 Sec 14 **T**—6-9:45, ArtB 140, Caglioti
 Sec 15 **Th**—6-9:45, ArtB 140, Feinberg
 Sec 16 **S**—8:30 a.m.-12:15, ArtB 140

***Arts 1102 DRAWING.** 4 degree credits, \$56 plus \$5 course fee. **Total \$61.**

Work from life and nature. Introduction to color and pictorial structure. (Prereq 1101. Limited to 25 students)

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

art, studio

Fall Qtr	Sec 1	T—6-9:45, ArtB 160, Somberg
	Sec 2	Th—6-9:45, ArtB 151, Cowette
Winter Qtr	Sec 3	T—6-9:45, ArtB 150, Morrison
	Sec 4	Th—6-9:45, ArtB 160, Cowette
Spring Qtr	Sec 5	M—6-9:45, ArtB 140, Hendler
	Sec 6	Th—6-9:45, ArtB 150, Caglioti

***ArtS 1104 COLOR.** 4 degree credits, \$56 plus \$5 course fee. **Total \$61.**

Introduction to color and pictorial organization. This will provide students with training in basic techniques preparatory to Upper Division painting and print making. (Prereq 1101. Limited to 25 students)

Fall Qtr	Sec 1	Th—6-9:45, ArtB 141, Bethke
Winter Qtr	Sec 2	Th—6-9:45, ArtB 141, Bethke
Spring Qtr	Sec 3	Th—6-9:45, ArtB 141, Bethke

***ArtS 1105 BEGINNING PAINTING.** 4 degree credits, \$56 plus \$5 course fee. **Total \$61.**

Introductory course to painting medium. Studio work in various media from nature, stillife, and other sources. Emphasis on individual expression and development. (Prereq 1104. Limited to 25 students)

Winter Qtr	Sec 1	T—6-9:45, ArtB 151, Somberg
Spring Qtr	Sec 2	T—6-9:45, ArtB 151, Somberg

***ArtS 1119 DRAFTING—BASIC DRAFTING TECHNIQUES.** 4 degree credits, \$56 plus \$1 special fee. **Total \$57.**

Instruction in use of drafting instruments. Emphasis on plans, elevations, etc., as related to interior design. (No prereq. Limited to 30 students)

Fall Sem	Sec 1	M—6:20-8:50, Arch 40, Dekker
	Sec 2	W—6:20-8:50, Arch 40, Dekker
Spring Sem	Sec 3	W—6:20-8:50, Arch 40, Dekker

***ArtS 1121 PERSPECTIVE AND PRESENTATION SKETCHES.** 4 degree credits, \$56.

Instruction in the various methods of perspective. Free-hand sketches of details. Finished renderings in perspective for final presentation as related to interior design. (No prereq. Limited to 30 students)

Fall Sem	Sec 1	T—6:20-8:50, Arch 40, Dekker
Spring Sem	Sec 2	M—6:20-8:50, Arch 40, Dekker

(See also Design)

***ArtS 1301, 1302 BASIC SCULPTURE.** 4 degree credits each quarter, \$56 plus \$15 course fee. **Total \$71** each quarter.

1301: Beginning course. Intensive study of structure with emphasis on form and space. Construction in metal and plaster. **1302:** Integrates basic principles examined in ArtS 1301. Natural form is studied. Imaginative approaches are encouraged. Construction in clay, plaster, wood. Mold-making and casting. (No prereq. Courses meet concurrently. Limited to 25 students)

Fall Qtr 1301	Sec 1	T—6-10:00, ArtB 90, Rose	
	Sec 2	W—6-10:00, ArtB 90, Baldwin	
	1302	Sec 3	T—6-10:00, ArtB 90, Rose
		Sec 4	W—6-10:00, ArtB 90, Baldwin
Winter Qtr 1301	Sec 5	M—6-10:00, ArtB 90, Potratz	
	Sec 6	T—6-10:00, ArtB 90, Baldwin	
	1302	Sec 7	M—6-10:00, ArtB 90, Potratz
		Sec 8	T—6-10:00, ArtB 90, Baldwin
Spring Qtr 1301	Sec 9	M—6-10:00, ArtB 90, Rose	
	Sec 10	W—6-10:00, ArtB 90, Potratz	
	1302	Sec 11	M—6-10:00, ArtB 90, Rose
		Sec 12	W—6-10:00, ArtB 90, Potratz

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

ArtS 1401 INTRODUCTION TO STUDIO ART.

(See Page 116)

***ArtS 1510 INTAGLIO.** 4 degree credits each quarter (maximum of 8 credits). \$56 plus \$10 course fee. **Total \$66** 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)

Fall Qtr Sec 1 **T**—6-9:45, ArtB 170, Myers

Winter Qtr Sec 2 **T**—6-9:45, ArtB 170, Myers

Spring Qtr Sec 3 **T**—6-9:45, ArtB 170, Myers

***ArtS 1520 LITHOGRAPHY.** 4 degree credits (maximum 8 cr). \$56 plus \$10 course fee. **Total \$66.**

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. Limited to 20 students. Meets concurrently with 3520, 5520)

Spring Qtr Sec 1 **S**—1:30-5:15, ArtB 176, Priede

***ArtS 1701 INTRODUCTION TO PHOTO MEDIUM.** 4 degree credits, \$56 plus \$10 course fee. **Total \$66.**

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. (No prereq. Limited to 20 students)

Fall Qtr Sec 1 **M**—6-9:45, ArtB 131, Warkov

Sec 2 **W**—6-9:45, ArtB 131, Warkov

Sec 3 **S**—8:30 a.m.-12:15, ArtB 131, Downs

Sec 4 **S**—1:30-5:15, ArtB 131, Downs

Winter Qtr Sec 5 **M**—6-9:45, ArtB 131, Warkov

Sec 6 **W**—6-9:45, ArtB 131, Warkov

Sec 7 **S**—8:30 a.m.-12:15, ArtB 131, Downs

Sec 8 **S**—1:30-5:15, ArtB 131, Downs

Spring Qtr Sec 9 **M**—6-9:45, ArtB 131, Warkov

Sec 10 **W**—6-9:45, ArtB 131, Warkov

Sec 11 **S**—8:30 a.m.-12:15, ArtB 131, Downs

Sec 12 **S**—1:30-5:15, ArtB 131, Downs

(See also Phys 3801, Introduction to the Physics of Photography)

***ArtS 1801 CERAMIC PROCESSES.** 4 degree credits, \$56 plus \$15 course fee. **Total \$71.**

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)

Fall Qtr Sec 1 **M**—6-9:45, ArtB 10

Sec 2 **T**—6-9:45, HoIB, Hoard

Sec 3 **W**—6-9:45, ArtB 10

Winter Qtr Sec 4 **M**—6-9:45, ArtB 10

Sec 5 **T**—6-9:45, HoIB, Hoard

Sec 6 **W**—6-9:45, ArtB 10

Spring Qtr Sec 7 **M**—6-9:45, ArtB 10

Sec 8 **T**—6-9:45, HoIB, Hoard

Sec 9 **W**—6-9:45, ArtB 10

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

art, studio

***ArtS 3100 WATER COLOR.** 4 degree credits each quarter (maximum of 12 cr). \$56 plus \$5 course fee. **Total \$61** each quarter.

Introduction to transparent water color, 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 or \$. Limited to 25 students)

Fall Qtr Sec 1 **M**—6-9:45, ArtB 141, Myers
Sec 2 **S**—8:30 a.m.-12:15, ArtB 161, Brown
Winter Qtr Sec 3 **M**—6-9:45, ArtB 141, Myers
Sec 4 **S**—8:30 a.m.-12:15, ArtB 161, Brown
Spring Qtr Sec 5 **M**—6-9:45, ArtB 141, Myers
Sec 6 **S**—8:30 a.m.-12:15, ArtB 161, Brown

***ArtS 3110 DRAWING.** 4 degree credits each quarter (maximum 12 cr). \$56 plus \$10 course fee. **Total \$66** each quarter.

Portraiture and life drawing from the model, stillife, and nature. Principles of anatomy. (Prereq 1102. Limited to 25 students)

Fall Qtr Sec 1 **M**—6-9:45, ArtB 151, Busa
Sec 2 **W**—6-9:45, ArtB 140, Feinberg
Winter Qtr Sec 3 **M**—6-9:45, ArtB 151, Busa
Spring Qtr Sec 4 **M**—6-9:45, ArtB 151, Busa

***ArtS 3114 COMMERCIAL DRAWING I.** 4 degree credits, \$56 plus \$5 course fee. **Total \$61.**

Basic drawing techniques; emphasis on the study of visual relationships in objects and the figure and their interpretation on the two-dimensional plane. (No prereq. Limited to 25 students)

Fall Qtr Sec 1 **T**—6-9:45, ArtB 141, Bethke
Winter Qtr Sec 2 **T**—6-9:45, ArtB 141, Bethke
Spring Qtr Sec 3 **T**—6-9:45, ArtB 141, Bethke

***ArtS 3115 COMMERCIAL DRAWING II.** 4 degree credits, \$56 plus \$5 course fee. **Total \$61.**

Applied commercial drawing; emphasis on current techniques and media and the implications of their use in the studio context. (Prereq 3114 or \$. Limited to 25 students)

Fall Qtr Sec 1 **Th**—6-9:45, ArtB 160, Jardine
Winter Qtr Sec 2 **Th**—6-9:45, ArtB 140, Jardine

***ArtS 3116 COMMERCIAL ART MEDIA.** 4 degree credits, \$56 plus \$5 course fee. **Total \$61.**

Transparent and opaque washes; ink line, dry brush, etc. Keyline, art techniques. Color relationships and systems. (Prereq 3115 or \$. Limited to 25 students)

Winter Qtr Sec 1 **M**—6-9:45, ArtB 160

***ArtS 3117 COMMERCIAL ILLUSTRATION.** 4 degree credits, \$56 plus \$5 course fee. **Total \$61.**

Development of skills in the use of various media and techniques and basic understanding of studio procedure and processing. (Prereq ArtS 3115 or \$. Limited to 25 students)

Spring Qtr Sec 1 **M**—6-9:45, ArtB 160, Smith

***ArtS 3118 ADVERTISING DESIGN I.** 4 degree credits, \$56 plus \$5 course fee. **Total \$61.**

Layout techniques, materials and style. Elements of typography. Basic advertising psychology. (Prereq 3117 or \$. Limited to 25 students)

Fall Qtr Sec 1 **M**—6-9:45, ArtB 160, Smith

***ArtS 3120 PAINTING.** 4 degree credits each quarter (maximum of 12 cr). \$56 plus \$10 course fee. **Total \$66** each quarter.

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

art, studio

Introduction to media and problems in painting. Individual projects and instruction. (Prereq 1105 and 3110 or §. Meets concurrently with 3150. Limited to 25 students)

Fall Qtr Sec 1 **M**—6-9:45, ArtB 161, Caglioti

Sec 2 **Th**—6-9:45, ArtB 161, Roode

Winter Qtr Sec 3 **M**—6-9:45, ArtB 161, Feinberg

Sec 4 **Th**—6-9:45, ArtB 161, Roode

Spring Qtr Sec 5 **M**—6-9:45, ArtB 161, Feinberg

Sec 6 **Th**—6-9:45, ArtB 161, Roode

ArtS 3135 INTERIOR DESIGN: HOUSING, DYNAMICS AND POLICY. 4 degree credits. \$56.

Introduction to the supply and demand characteristics of the housing market, both rented and owned. Elements comprising the market will be studied as well as the interaction among the elements and the effect of various public and private policies and programs. Current issues and emerging strategies of housing will be examined in the context of local, metropolitan, state and national settings. (No prereq)

Fall Sem Sec 1 **M**—6:20-8:00, Arch 35, Hozza

ArtS 3136 INTERIOR DESIGN: HOUSING AND THE URBAN ENVIRONMENT. 4 degree credits. \$56.

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. (No prereq)

Spring Sem Sec 1 **M**—6:20-8:00, Arch 35, Hozza

(See also Design)

***ArtS 3150 PAINTING.** 4 degree credits each quarter (maximum 12 cr). \$56 plus \$5 course fee. **Total \$61** each quarter.

Oil and acrylic painting. (Prereq 1101 or §. Not open to ArtS majors. Meets concurrently with 3120. Limited to 25 students)

Fall Qtr Sec 1 **M**—6-9:45, ArtB 161, Caglioti

Sec 2 **Th**—6-9:45, ArtB 161, Roode

Winter Qtr Sec 3 **M**—6-9:45, ArtB 161, Feinberg

Sec 4 **Th**—6-9:45, ArtB 161, Roode

Spring Qtr Sec 5 **M**—6-9:45, ArtB 161, Feinberg

Sec 6 **Th**—6-9:45, ArtB 161, Roode

***ArtS 3302 PLASTICS MEDIA: WOOD, STONE CARVING.** 4 degree credits, \$56 plus \$15 course fee. **Total \$71.**

See course description for 1302. (Prereq 1301, 1302. Meets concurrently with 5320. Limited to 15 students)

Winter Qtr Sec 1 **M**—6-9:45, ArtB 50, Rose

***ArtS 3303 CAST METAL SCULPTURE.** 4 degree credits, \$56 plus \$15 course fee. **Total \$71.**

Lost wax and sand casting in bronze, aluminum, iron. (Prereq 1301, 1302. Meets concurrently with 5330. Limited to 15 students)

Fall Qtr Sec 1 **T**—6-9:45, HolB, Potratz

***ArtS 3304 CONSTRUCTIONS, KINETICS, ELECTRONIC SCULPTURE.** 4 degree credits, \$56 plus \$15 course fee. **Total \$71.**

Kinetics and mechanics. (Prereq 1302. Meets concurrently with 5340. Limited to 15 students)

Spring Qtr Sec 1 **Th**—6-10:00, ArtB 90, Baldwin

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

art, studio

***Arts 3510 INTAGLIO.** 4 degree credits each quarter (maximum of 12 cr). \$56 plus \$10 course fee. **Total \$66** 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 3. Meets concurrently with 1510, 5510. Limited to 25 students)

Fall Qtr Sec 1 **T**—6-9:45, ArtB 170, Myers

Winter Qtr Sec 2 **T**—6-9:45, ArtB 170, Myers

Spring Qtr Sec 3 **T**—6-9:45, ArtB 170, Meyers

***Arts 3520 INTERMEDIATE LITHOGRAPHY.** 4 degree credits (maximum 12 cr). \$56 plus \$10 course fee. **Total \$66.**

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 1520. Meets concurrently with 1520, 5520. Limited to 20 students.)

Spring Qtr Sec 1 **S**—1:30-5:15, ArtB 176, Priede

***Arts 3701 INTRODUCTION TO ART OF FILMMAKING.** 4 degree credits, \$56 plus \$10 course fee. **Total \$66.**

Lectures and practical aspects of making films. Production limited to descriptive and experimental work. (No prereq. Meets concurrently with 3720. Limited to 20 students)

Fall Qtr Sec 1 **M**—6-9:45, ArtB 120, Downs

Sec 2 **T**—6-9:45, ArtB 120, Downs

Winter Qtr Sec 3 **M**—6-9:45, ArtB 120, Downs

Spring Qtr Sec 4 **M**—6-9:45, ArtB 120, Downs

***Arts 3710 INTERMEDIATE PHOTOGRAPHY.** 4 degree credits each quarter (maximum 8 cr). \$56 plus \$10 course fee. **Total \$66** 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 Jour 1301 or 3. Limited to 20 students)

Fall Qtr Sec 1 **T**—6-9:45, ArtB 131, Hallman

Sec 2 **Th**—6-9:45, ArtB 131, Hallman

Winter Qtr Sec 3 **T**—6-9:45, ArtB 131, Hallman

Sec 4 **Th**—6-9:45, ArtB 131, Hallman

Spring Qtr Sec 5 **T**—6-9:45, ArtB 131, Hallman

Sec 6 **Th**—6-9:45, ArtB 131, Hallman

***Arts 3720 FILM WORKSHOP.** 4 degree credits, \$56 plus \$10 course fee. **Total \$66.**

Practical study of motion picture as an art form. Production limited to descriptive and experimental work. (Prereq 3. Meets concurrently with 3701. Limited to 20 students)

Fall Qtr Sec 1 **M**—6-9:45, ArtB 120, Downs

Sec 2 **T**—6-9:45, ArtB 120, Downs

Winter Qtr Sec 3 **M**—6-9:45, ArtB 120, Downs

Spring Qtr Sec 4 **M**—6-9:45, ArtB 120, Downs

***Arts 3810 CERAMIC DESIGN.** 4 degree credits each quarter (maximum 8 cr). \$56 plus \$15 course fee. **Total \$71** each quarter.

Greater emphasis on wheel throwing. Advanced design problems and introduction to glaze and clay experimentation. Emphasis on development of personal expression in ceramic medium. (Prereq 1801 or 3. Limited to 20 students)

Fall Qtr Sec 1 **Th**—6-9:45, HoIB, Hoard

Winter Qtr Sec 2 **Th**—6-9:45, HoIB, Hoard

Spring Qtr Sec 3 **Th**—6-9:45, HoIB, Hoard

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

ArtS 5110 ADVANCED DRAWING. 4 degree credits each quarter (maximum 12 cr). \$60 plus \$10 course fee. **Total \$70** each quarter.

Primarily for painting majors. Drawing in all mediums from life and from imagination; history of drawing. (Prereq 12 cr of 3110. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 T—6-9:45, ArtB 150, Morrison

Spring Qtr Sec 2 T—6-9:45, ArtB 150, Morrison

***ArtS 5120 PROBLEMS IN PAINTING.** 4 degree credits each quarter (maximum 12 cr). \$60 plus \$10 course fee. **Total \$70** 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. Limited to 25 students. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 W—6-9:45, ArtB 151, Busa

***ArtS 5320 PLASTICS MEDIA: WOOD, STONE CARVING.** 4 degree credits, \$60 plus \$15 course fee. **Total \$75.**

See course description for 1302. (Prereq 1301, 1302. Meets concurrently with 3302. Limited to 15 students. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 M—6-9:45, ArtB 50, Rose

***ArtS 5330 CAST METAL SCULPTURE.** 4 degree credits, \$60 plus \$15 course fee. **Total \$75.**

See course description for 3303. (Prereq 1301, 1302. Meets concurrently with 3303. Limited to 15 students. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 T—6-9:45, HoIB, Potratz

***ArtS 5340 CONSTRUCTIONS, KINETICS, ELECTRONIC SCULPTURE.** 4 degree credits, \$60 plus \$15 course fee. **Total \$75.**

See course description for 3304. (Prereq 1302. Meets concurrently with 3304. Limited to 15 students. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 Th—6-10:00, ArtB 90, Baldwin

***ArtS 5510 ADVANCED INTAGLIO.** 4 degree credits each quarter (maximum 12 cr). \$60 plus \$10 course fee. **Total \$70** 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 3511. Meets concurrently with 1510, 3510. Limited to 25 students. 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

Spring Qtr Sec 3 T—6-9:45, ArtB 170, Myers

***ArtS 5520 ADVANCED LITHOGRAPHY.** 4 degree credits (maximum 12 cr). \$60 plus \$10 course fee. **Total \$70.**

Strong emphasis in creative and individual approach to lithography. Critiques and discussions are directed to understanding the intrinsic qualities of the lithographic medium. (Prereq 1520. Limited to 20 students. Meets concurrently with 1520, 3520. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 S—1:30-5:15, ArtB 176, Priede

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

art, studio—astronomy

“winter quarter in mexico”

Tlaxiaco, Oaxaco, Mexico is the site for a unique University program sponsored by Continuing Education and Extension. Under the guidance of experienced teachers, and with the aid of local craftsmen, students will learn, first hand, both the specific art and craft techniques and the cultural context in which those arts are nourished. In Tlaxiaco, craftsmen practice traditional methods in ceramic work, weaving, and metal work, within a cultural framework that is little affected by most aspects of contemporary urban culture. In addition, several famous archaeological sites—Teotihuacan, Tula, Mitla, Monte Alban and Cholula—are all within a day's drive.

Students will register for 12 credits of off-campus work. 8 of these credits will be from among the following Studio Art Courses:

ArtS 1420	Workshop: Photography
ArtS 3420	
ArtS 3420	Workshop: Film (Motion Picture Photography)
ArtS 1420	Workshop: Ceramic Design
ArtS 3420	
ArtS 3420	Workshop: Painting
ArtS 5420	

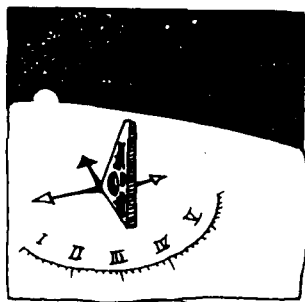
Other courses may be drawn from such fields as Linguistics, Anthropology, Spanish, and Related Arts (College of Agriculture).

“Winter Quarter in Mexico” is limited to 45 students. Interested students should apply Fall Quarter (no later than October 14) to Professor Allen Downs, Department of Studio Art, 1946 Tatum, St. Paul 55113; telephone 645-9568.

Applications may be in the form of a letter and should state the applicant's interest in studying in Mexico. Both the preferred art courses and the type of study contemplated in the related field should be listed together with the applicant's reason for wanting the course. Knowledge of Spanish is recommended but not required.

If accepted, the applicant will be expected to work out a program of studies under the guidance of an adviser in both the Department of Studio Art and the department in which the related studies are planned, during the Fall Quarter prior to the Winter study in Mexico.

astronomy (Ast)



See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

Karlis Kaufmanis, Professor of Astronomy
Ivan Policoff, Associate Professor of Astronomy

Ast 1008 SOLAR SYSTEM. 3 degree credits, \$1011. \$42.

Survey of what is known about the properties and motions of the planets and their satellites, comets, and meteors, illustrated by slides and telescopic observations. Non mathematical course. (No prereq)

Fall Sem Sec 1 **T**—6:20-8:00, Ph 131, Kaufmanis

Winter Qtr Sec 2 **M**—6:30-9:00, Kel HS 168-170, Policoff (Limit 45 students*)

Spring Qtr Sec 3 **W**—7-9:30, Ph 131, Kaufmanis

Ast 1009 STARS AND GALAXIES. 3 degree credits, \$1011. \$42.

Discussion of constellations, properties and motions of stars, and the structure of the universe. Extended opportunity for the use of the telescope. Nonmathematical course. (No prereq)

Fall Qtr Sec 1 **M**—7-9:30, Rich HS 341, Policoff (Limit 65 students*)

Spring Sem Sec 2 **T**—6:20-8:00, Ph 131, Kaufmanis

biology (Biol)

(See also Botany and Ecology)

Eville Gorham, Professor of Botany
Norman Kerr, Professor of Zoology
Douglas Pratt, Professor of Botany
William Schmid, Professor of Zoology
James Underhill, Professor of Zoology

Biol 1011 GENERAL BIOLOGY. 5 degree credits, \$70 plus \$10 course fee. **Total \$80.** (♦\$21 lecture only)

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 multi-media. Students must attend lectures on both Tuesday and Thursday and laboratory sessions on both Tuesday and Thursday. (No prereq)

Fall Qtr Sec 1 **Lect TTh**—6-7:10, NH 45, Kerr

Lab TTh—7:20-9:00, Kolth S160, S167, S170, S177,
S179, S183

Winter Qtr Sec 2 **Lect TTh**—6-7:10, NH 45, Kerr

Lab TTh—7:20-9:00, Kolth S160, S167, S170, S177,
S179, S183

Spring Qtr Sec 3 **Lect TTh**—6-7:10, NH 45, Kerr

Lab TTh—7:20-9:00, Kolth S160, S167, S170, S177,
S179, S183

Biol 1106 GENERAL ZOOLOGY. 5 degree credits, \$70 plus \$10 course fee. **Total \$80.**

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)

Fall Qtr Sec 1 **Lect T**—7-9:30, Z 313, Schmid

Lab Th—7-10:00, Kolth P168

Spring Qtr Sec 2 **Lect T**—7-9:30, Z 313, Underhill

Lab Th—7-10:00, Kolth P168

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

biology—business administration

Biol 3051 BIOLOGY AND THE FUTURE OF MAN. 4 degree credits, \$56. (◆\$28)

A nontechnical discussion of biological factors affecting the state of the environment and the quality of life. Topics may include pollution, warfare, energy and mineral resources, food supply, population growth and control, genetics and eugenics, public health, the value of wilderness, and biological aspects of ethics and morals. **Must be taken S-N.** (No prereq)

Spring Sem Sec 1 **W**—6:20-8:40, Z 313, Gorham, Pratt

(See other environmental courses, page 171)

botany (Bot)

Veta Bonnewell, Instructor in Botany

Herbert Jonas, Professor of Botany

Bot 1009 MINNESOTA PLANT LIFE. 4 degree credits, \$56. (◆\$28)

Nontechnical survey of all groups of plants native to Minnesota; identification and distribution. Saturday field trips will be planned. (No prereq)

Spring Qtr Sec 1 **MW**—6:20-8:50, Bo 301, Bonnewell

Bot 1012 PLANTS USEFUL TO MAN. 4 degree credits, \$56. (◆\$28)

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 **T**—6:20-8:50, BoB 6, Jonas (demonstration time arr)

business administration

Your attention is called to the Business Administration Certificate programs, page 82.

Please see the following alphabetical listings for course offerings:

ACCOUNTING

BUSINESS ADMINISTRATION COURSES

BUSINESS LAW

FINANCE

INDUSTRIAL RELATIONS

INSURANCE

MANAGEMENT

MANAGEMENT INFORMATION SYSTEMS

MARKETING

OPERATIONS ANALYSIS AND MANAGEMENT

QUANTITATIVE ANALYSIS

REAL ESTATE

SALESMANSHIP

TRANSPORTATION

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

business administration

(See also Economics, Comp 0003C, Business English and Hist 3841, American Business History)

For non-credit conferences or seminars in business administration, write or call Director, 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
University of Minnesota
Minneapolis, Minnesota 55455 (373-5505)

business administration (BA) courses

John Flagler, Professor of Labor Education

Delbert C. Hastings, Professor of Management Sciences

Robert J. Holloway, Professor of Marketing and Business Law

Albert J. Macek, Research Advisor, Social Sciences, North Star Research

James Rakowski, Assistant Professor of Transportation

Orville Walker, Associate Professor of Marketing and Business Law

*BA 3002 BUSINESS AND SOCIETY. 4 degree credits, \$56.

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. Limited to 60 students)

Fall Qtr Sec 1 **M**—5:30-8:00, BlegH 115, Flagler

Sec 2 **T**—5:30-8:00, BlegH 115, Macek

Winter Qtr Sec 3 **M**—5:30-8:00, BlegH 125, Flagler

Sec 4 **W**—5:30-8:00, BlegH 125, Rakowski

Spring Sem Sec 5 **T**—8:15-9:55, BlegH 115, Holloway

Spring Qtr Sec 6 **M**—5:30-8:00, BlegH 125, Flagler

Sec 7 **T**—5:30-8:00, BlegH 125, Hastings

BA 3003 BUSINESS AND THE PHYSICAL ENVIRONMENT. 4 degree credits, \$56.

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. (No prereq)

Fall Sem Sec 1 **T**—6:20-8:00, BlegH 150, Holloway

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

business education—business law

business education

(See Vocational Education)

business finance

(See Finance)

business law (BLaw)

Albert O. Andrews, Jr., Lecturer in Business Law

John R. Carroll, Lecturer in Business Law

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

Richard A. Nordbye, Lecturer in Business Law

James E. O'Brien, Lecturer in Business Law

James D. Olson, Lecturer in Business Law

C. Harold 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

Paul Van Valkenburg, Lecturer in Business Law

Wells J. Wright, Lecturer and Coordinator of Business Law

(See also General College Legal Paraprofessions, page 58)

BLaw 0001C- COMMON LEGAL PROBLEMS. 3 certificate credits, \$42.

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 Qtr Sec 1 **Th**—7-9:30, Sand JHS 213 (Limit 45 students*)

Spring Sem Sec 2 **Th**—6:20-8:00, NH 209

Blaw 0098C BUSINESS LAW—LAW OF REAL PROPERTY. 3 certificate credits, \$42.

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)

Spring Sem Sec 1 **W**—6:20-8:00, BlegH 255, Carroll

Sec 2 **Th**—6:20-8:00, BlegH 155, Olson

BLaw 3058-3078, 3088 BUSINESS LAW. 4 degree credits each term, \$56 each term.★

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

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

business law—business studies

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 contacts, 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 **Th**—7-9:30, Mtka HS 125, Diessner (Limit 45 students*)
Sec 2 **T**—6:30-9:00, Kel HS 235, J VanValkenburg,
O'Brien (Limit 35 students*)
- 3088** Sec 3 **T**—6:20-8:50, BlegH 155, Nordbye
- Fall Sem 3058** Sec 4 **T**—6:20-8:00, BlegH 135, Robb (Limit 45 students*)
Sec 5 **W**—6:20-8:00, BlegH 225, Lovett (Limit 45 students*)
- 3078** Sec 6 **W**—8:15-9:55, BlegH 125, Lovett
- Winter Qtr 3058** Sec 7 **T**—7-9:30, Sand JHS 213, J VanValkenburg
(Limit 45 students*)
Sec 8 **T**—6:20-8:50, BlegH 145, Andrews
Sec 9 **Th**—6:20-8:50, AndH 330, Mahler
- 3078** Sec 10 **T**—6:30-9:00, Kel HS 235, P VanValkenburg
(Limit 35 students*)
- Spring Sem 3058** Sec 11 **W**—8:15-9:55, BlegH 150, Robb, P VanValkenburg
- Spring Qtr 3058** Sec 12 **T**—7-9:30, Rich HS 341, Hassel (Limit 45 students*)
Sec 13 **Th**—6:20-8:50, BlegH 215, J VanValkenburg
- 3078** Sec 14 **T**—6:20-8:50, BlegH 415, J VanValkenburg
- 3088** Sec 15 **T**—6:20-8:50, BlegH 145, Nordbye

business studies

(General College-GC)

Dennis Hammond, Instructor
Dennis Hower, Associate Professor
Patrick Kroll, Assistant Professor
Roger Larson, Professor
Ruth Larson, Assistant Professor
Mark Ludlow, Instructor

(See General College Degree and Occupational Programs, pages 57, 58)

***GC 1235 THE LAW IN SOCIETY.** 4 degree credits, \$56.

Introduction to major principles and functioning of our legal system. Students participate in organization and emphasis of the course. Guest lecturers, tours and films lend practical knowledge to theoretical problems. Topics to be selected by students include: drug problems; pollution; the draft; racism; the war; Minnesota correctional system, etc. (No prereq. Limited to 40 students)

See symbols, page 33.

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business studies

Fall Qtr Sec 1 **Th**—6:20-8:50, NH 216, Hower

Winter Qtr Sec 2 **Th**—7-9:30, Kel HS 229, Hower (Limit 35 students*)

Spring Qtr Sec 3 **Th**—6:20-8:50, NH 216, Hower

*GC 1511 INTRODUCTION TO MODERN BUSINESS. 4 degree credits, \$56.★

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)

Fall Qtr Sec 1 **M**—6-8:30, NH 207, Ruth Larson

(See also Principles of Economics. Econ 1001, 1002)

*GC 1513 PRINCIPLES OF SMALL BUSINESS OPERATIONS. 4 degree credits, \$56.★

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)

Winter Qtr Sec 1 **W**—6:20-8:50, NH 107, Ludlow

Spring Qtr Sec 2 **T**—6:20-8:50, NH 107, Hammond

GC 1534 PRATICAL LAW. 5 degree credits, \$70. (♦\$35)

Practical topics in field of law. Formation and discharge of contracts (personal injury and property damage suits), criminal law, bail nature and classification of real and personal property, and ownership and tenancy. In addition, some attention is given to implication of life, property, auto insurance, and an introduction to and estate planning. (No prereq)

Spring Qtr Sec 1 **Th**—6:20-8:50, Elim Church, room 205, 466 Broadway, Robbinsdale

*GC 1535 INTRODUCTION TO DATA PROCESSING. 4 degree credits, \$56.★

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, Bu 123

Winter Qtr Sec 2 **W**—7-9:30, Rich HS 220 (Limit 30 students*)

*GC 3581 LEGAL STUDIES: BUSINESS ORGANIZATION. 4 degree credits, \$56.

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 Acct 1024, BLaw 3058 and GC 1234 or BLaw 3058-3078, 3088 or †. Limited to 25 students)

Fall Qtr Sec 1 **Th**—6:20-8:50, NH 207

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

business studies

*GC 3582 LEGAL STUDIES: REAL ESTATE. 4 degree credits, \$56.

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 Acct 1024, BLaw 3058-3078, 3088 or \$. Limited to 25 students)

Winter Qtr Sec 1 Th—6:20-8:50, NH 207

*GC 3583 LEGAL STUDIES: ESTATE PLANNING AND ADMINISTRATION. 4 degree credits, \$56.

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. (Prereq Acct 1024, BLaw 3058 and GC 1235 or BLaw 3058-3078, 3088 or \$; Limited to 25 students)

Winter Qtr Sec 1 M—6:20-8:50, NH 207

*GC 3584 LEGAL STUDIES: LITIGATION AND TRIAL PRACTICE. 4 degree credits, \$56.

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 Acct 1024, BLaw 3058-3078, 3088 or \$. Limited to 25 students)

Spring Qtr Sec 1 Th—6:20-8:50, NH 209A

*GC 3585 LEGAL STUDIES: INCOME TAXATION. 4 degree credits, \$56.

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 Acct 1024, BLaw 3058-3078, 3088 or \$. Limited to 25 students)

Spring Qtr Sec 1 M—6:20-8:50, NH 207

*GC 3586 LEGAL STUDIES: LEGAL RESEARCH. 4 degree credits, \$56.

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 Acct 1024, BLaw 3058-3078, 3088. Limited to 25 students)

Fall Qtr Sec 1 M—6:20-8:50, NH 216

marketing sequence

Patrick Kroll, Instructor
Roger Larson, Professor

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

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business studies

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, and 3 credits of GC 1557, a certificate in Marketing is granted the students by the General College of the University.

***GC 1551 MARKETING: RETAILING AND SALES.** 4 degree credits, \$56.

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, PeikH 315, Kroll

Sec 2 W—6:20-8:50, PeikH 315, Larson

***GC 1552 MARKETING: SALES PROMOTION.** 4 degree credits, \$56.

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 T—6:20-8:50, PeikH 275, Kroll

Sec 2 W—6:20-8:50, PeikH 275, Larson

***GC 1553 MARKETING: PRINCIPLES OF MANAGEMENT.** 4 degree credits, \$56.

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, PeikH 275, Kroll

Sec 2 W—6:20-8:50, PeikH 275, Larson

(See also Marketing and Business Law)

GC 1557 MARKETING: SUPERVISED WORK EXPERIENCE. 1-3 degree credits, \$14 per credit.

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 Time arr. Kroll

Sec 2 Time arr. Larson

Winter Qtr Sec 3 Time arr. Kroll

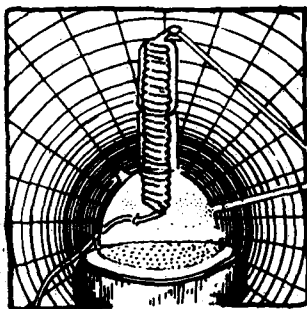
Sec 4 Time arr. Larson

Spring Qtr Sec 5 Time arr. Kroll

Sec 6 Time arr. Larson

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chemistry (Chem)

(See also Professional Recognition Program in Engineering and Science, page 194)

Robert Brasted, Professor of Chemistry
Keith Coad, Lecturer in Chemistry
William Gleason, Instructor in Chemistry
Edward Meehan, Professor of Chemistry

A \$10 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.

general chemistry

Chem 1004-1005t. GENERAL PRINCIPLES OF CHEMISTRY. 5 degree credits each semester, \$70 plus \$5 special fee and \$6 course fee. Total \$81 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, H.S. chemistry, H.S. physics strongly recommended for 1004; 1004 for 1005.)

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, \$56 plus \$5 special fee and \$6 course fee. Total \$67.

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

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chemistry—child psychology

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)

Fall Sem Sec 1 **Lect T**—6:20-8:00, SmithH 325, Coad

Lab Th—6:20-9:30, SmithH 210

Chem 3100 QUANTITATIVE ANALYSIS. 3 degree credits, \$42.

A survey of quantitative methods of analysis. Lecture. Not for chemistry majors. (Prereq 1005)

Fall Qtr Sec 1 **M**—6:30-9:00, SmithH 315, Meehan

***Chem 3301-3302 ELEMENTARY ORGANIC CHEMISTRY.** 5 degree credits each semester, \$70 plus \$6 course fee and \$5 special fee. **Total \$81** each semester.

Important classes of organic compounds, both aliphatic and aromatic, together with some heterocyclic compounds. Laboratory work includes the preparation of typical substances. (Prereq 1005 or 1032 or equiv for 3301; 3301 or 3305H for 3302. Limited to 49 students)

Fall Sem 3301 Sec 1 **Lect T**—6-8:30, SmithH 325

Lab Th—6-9:30, SmithH 349, Gleason

Spring Sem 3302 Sec 2 **Lect T**—6-8:30, SmithH 325

Lab Th—6-9:30, SmithH 349, Gleason

child psychology (CPsy)

(See also Education)

Thomas Berndt, National Science Foundation Fellow, Institute of Child Development

Judith Brown, Administrator for special schools, Special Education Division, Minneapolis Public Schools

Robert Bruininks, Associate Professor of Special Education

W. Andrew Collins, Assistant Professor of Child Psychology, Institute of Child Development

Seymour Gross, Psychologist, Pilot City Health Center

Valerie Hess, National Institute of Mental Health Trainee in Child Psychology, Institute of Child Development

Harold Ireton, Associate Professor, Department of Family Practice and Community Health

Jacques Lempers, Graduate Assistant, Institute of Child Development

David Morris, Institute of Child Development

Murray Reed, Chief Psychologist, Wilder Child Guidance Clinic

Gail Roberts, Director of Child Development Planning Project, State Planning Agency

Jerry Tomlinson, Coordinator of Psychological Services, Minneapolis Public Schools

Robert VanSiclen, National Institute of Mental Health Trainee in School Psychology, Institute of Child Development

Herry Wellman, National Institute of Child Health and Human Development Trainee in Research in Human Learning, Institute of Child Development

Everett Waters, National Institute of Child Health and Human Development Trainee in Behavior and Development of Preschool Children, Institute of Child Development

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S-N registration not permitted in Child Psychology unless specifically indicated in course description.

CPsy 3301 CHILD PSYCHOLOGY. 4 degree credits, \$56.★

Introduction to the science of child behavior; emphasis on critical review of theories and research. (Prereq 5 cr introductory psychology)

Fall Qtr Sec 1 **M**—7-9:30, Sand JHS 204, Hess (Limit 35 students*)

Sec 2 **T**—6:20-8:50, WuH 213, Roberts

Winter Qtr Sec 3 **T**—4-6:30, CD 216, Lempers

Sec 4 **W**—7-9:30, Rich HS 341, Wellman (Limit 45 students*)

Spring Qtr Sec 5 **T**—7-9:30, Kel HS 235, Waters (Limit 35 students*)

(CPsy 3301 also offered Tuesdays, Winter Quarter at Cambridge High School, Cambridge, Minnesota. For registration information, contact Bill VanEssendelft, Program Director, Extension Classes, 180 Wesbrook Hall, University of Minnesota, Minneapolis MN 55455 [376-4815])

CPsy 5303 ADOLESCENT PSYCHOLOGY. 4 degree credits, \$60.★

Physical, cognitive, and social development during adolescence. (Prereq 5 cr introductory psychology. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **T**—6:20-8:50, Bu 123, Morris

Spring Qtr Sec 2 **T**—6:30-9:00, Sand JHS 204, Tomlinson (Limit 35 students*)

(CPsy 5303 also offered Wednesdays, Spring Quarter at Cambridge High School, Cambridge, Minnesota. For registration information, contact Bill VanEssendelft, Program Director, Extension Classes, 180 Wesbrook Hall, University of Minnesota, Minneapolis, MN 55455 [376-4815])

CPsy 5311 BEHAVIOR PROBLEMS. 4 degree credits, \$60.

Types, origin, development, and treatment of behavior difficulties in normal children. (Prereq CPsy 3301 or equiv. 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 **W**—6:20-8:50, Bu 123, Ireton

Spring Qtr Sec 3 **M**—7:30-10:00, CD 105, VanSiclen

CPsy 5313 PSYCHOLOGY OF ATYPICAL CHILDREN. 4 degree credits, \$60.

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 3301 or equiv. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **M**—6:20-8:50, CD 105, Brown

CPsy 5315 INTRODUCTION TO MENTAL RETARDATION. 4 degree credits, \$SpEd 5120, \$60.

Psychological and educational problems related to the mentally retarded. (Prereq CPsy 3301 or equiv. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **Th**—6:20-8:50, CD 105, Bruininks

***CPsy 5319 CLINICAL PROCEDURES WITH CHILDREN.** 4 degree credits, \$60.

Survey of methods of clinical psychology; basic concepts and research problems in clinical work with children; 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, CD 218, Gross

See symbols, page 33.

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child psychology—civil and mineral engineering

CPsy 5331 PROCESSES OF SOCIALIZATION OF CHILDREN. 4 degree credits, \$60.

Processes of social learning; identification, imitation, reward and punishment, internalization and object choice. (Prereq CPsy 3301 or graduate. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **Th**—6:20-8:50, Bu 120, Collins

Spring Qtr Sec 2 **W**—7-9:30, Rich HS 220, Berndt (Limit 30 students*)

chinese

(See East Asian Languages)

civil and mineral engineering (CE)

(See also Professional Recognition Program in Engineering and Science, page 194)

Alvin Anderson, Professor of Civil and Mineral Engineering

C.E. Bowers, Professor of Civil and Mineral Engineering

Ladislav Cerny, Associate Professor of Civil and Mineral Engineering

Howard I. Epstein, Assistant Professor of Civil and Mineral Engineering

Jesse E. Fant, Professor of Civil and Mineral Engineering

Matthew J. Huber, Associate Professor of Civil and Mineral Engineering

Gerald W. Johnson, Assistant Professor of Civil and Mineral Engineering

Your attention is called to the Undergraduate Development Certificate in Civil Engineering—90 credits, page 90.

CE 0005 REFRESHER COURSE FOR CIVIL ENGINEERS. No credit, \$56.

This course is for practicing engineers and consists of lectures and problem sessions relating to highways, soils, sanitary, structural and hydraulic engineering. (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, Bowers, Johnson, Cerny

(See also refresher courses in engineering fundamentals [page 194], electrical engineering [page 159], and mechanical engineering [page 261]).

CE 3200 INTRODUCTION TO TRANSPORTATION ENGINEERING. 4 degree credits, \$56.

The 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. Introduction to engineering economics with particular emphasis on costs of transportation systems. (Prereq Phys 1271)

Fall Qtr Sec 1 **T**—6-9:20, Ex 193, Huber

CE 3805 INTRODUCTION TO STRUCTURAL ANALYSIS. 4 degree credits, \$56.

Principles of structure mechanics; forces and deformations in one-dimensional structural elements; elementary design considerations. (Prereq AEM 1015)

Fall Qtr Sec 1 **W**—5:45-9:05, Aero 225, Epstein

CE 5099 ADVANCED DESIGN, ANALYSIS, RESEARCH OR TUTORIAL IN CIVIL ENGINEERING (LAND PLANNING AND SUBDIVISION DESIGN). 4 degree credits, \$60.

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civil and mineral engineering

The study and analysis of land planning and development problems. Economics and design of road patterns, lot and block layout, drainage, utilities, etc. Design, computation, and preparation of record plats. (Prereq 3100, 3102, or §. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **Lect Th**—6-9:20, Ex 193

Lab S—9 a.m.-12:00 (Apr 26; May 10, 24), Fant

CE 5100 LAND SURVEYING. 4 degree credits, \$60.

Minnesota Public Land Survey. Federal and state laws governing resurveys, registered land surveys, and subdivision plats. Court decisions and legal principles involving boundary line determinations. Interpreting and writing deed descriptions. (Prereq 3100, 3102, or §. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **Lect Th**—6-9:20, Ex 193

Lab S—9 a.m.-12:00, (Mar. 1, 8) Fant

CE 5200 GEOMETRIC DESIGN OF HIGHWAYS. 4 degree credits, \$60.

Forecast of traffic volume demand; impact of vehicle type on geometric design; vertical and horizontal alignment; intersection design; highway capacity. (Prereq 3200, 3102 or §. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **Lect T**—6-9:20, Aero 225

Lab—indiv. project arr., Huber

CE 5201 HIGHWAY TRAFFIC CHARACTERISTICS AND OPERATIONS. 4 degree credits, \$60.

Characteristics and measurements of volume, speed, density, and travel time; characteristics of vehicles and road users; parking characteristics and design of facilities; applications of signs, signals, and markings in traffic control. (Prereq 3200 or equiv. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **Lect T**—6-9:20, Ex 193

Lab—indiv. projects arr., Huber

CE 5410 OPEN CHANNEL HYDRAULICS. 4 degree credits, \$60.

Mechanics of flow in open channels including gradually varied, spatially varied, and rapidly varied flow; unsteady flow (waves and surges) and flow in alluvial channels. (Prereq 5401 or §. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **Lect Th**—6-9:20, MinMet 116

Lab S—9 a.m.-12:00, (Oct. 5, 19; Nov. 2, 16, 30)

Anderson

CE 5600 LINEAR STRUCTURAL SYSTEMS. 4 degree credits, \$60.

Analysis of elementary indeterminate structural systems; introduction to the stiffness and flexibility methods of analysis; torsion and biaxial bending; stability of framework; design consideration. (Prereq 3605. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **W**—5:45-9:05, MinMet 116, Epstein

CE 5601 ANALYSIS OF STRUCTURES. 4 degree credits, \$60.

Analysis of linear structural systems by matrix methods. (Prereq 5600. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **W**—5:45-9:05, MinMet 116, Epstein

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

civil defense—classics

civil defense

For information on non-credit conferences or workshops in civil defense, please contact Robert J. Elliott, Civil Defense Education, 1633 Eustis Street, St. Paul, Minnesota 55108.

classics

(See also Latin)

William Coulson, Assistant Professor of Classics
Gerald M. Erickson, Associate Professor of Classics
Jackson P. Hershbell, Associate Professor of Classics
A. Thomas Kraabel, Associate Professor of Classics
George Rochefort, Assistant Professor of Classics
Robert P. Sonkowsky, Professor of Classics

NOTE—Classics (Clas) courses require no knowledge of Latin or Greek.

Class 1007 THE WORLD OF GREECE. 4 degree credits, \$5007. To be offered 1975-76.

Class 1008 THE WORLD OF ROME. 4 degree credits, \$5008. \$56. (◆\$28)

General survey of Roman civilization from its origins to the reign of Constantine. The Roman way of life as seen in art, history, literature, and philosophy. Special attention paid to the Etruscans and to the golden age of Rome under Augustus. (No prereq. Meets concurrently with 5008. May be applied toward the CLA foreign language requirement, Route II [see page 61]. For upper division or graduate credit register in 5008).

Winter Qtr Sec 1 **M**—6-8:30, FolH 308, Rochefort

Class 1019 MAGIC, WITCHCRAFT, AND THE OCCULT IN GREECE AND ROME. 4 degree credits, \$56. (◆\$28)

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. See also page 000).

Spring Qtr Sec 1 **T**—6-8:30, FolH 202, Erickson

Class 1045 GREEK AND ROMAN MYTHOLOGY. 3 degree credits, \$5145. \$42. (◆\$21)

Classical myths dealing with gods, demi-gods, and heroes. Attention to the myths as stories and as a basic component of the European cultural heritage, including artistic, religious, psychological, and anthropological interpretations. Distinctions between myth and legend, mythology and mythography. Special attention to the use of myths in modern literature. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 61]. Meets concurrently with 5145)

Fall Qtr Sec 1 **M**—6-8:30, FolH 308, Hershbell

Class 1122 GREEK ART, ARCHITECTURE AND ARCHAEOLOGY: AN INTRODUCTORY COURSE. 4 degree credits, \$5122. \$56. (◆\$28)

Survey of Greek art from the earliest times to 31 B.C. Attention paid to the main trends and concepts in architecture, sculpture and painting; also examination of the art in its social, literary and historical context. (No prereq. Meets concurrently with 5122. May be applied to the CLA foreign language requirement, Route II [see page 61]. For graduate credit register in 5122)

Winter Qtr Sec 1 **Th**—6-8:30, FolH 201, Coulson

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

N
E
W

Clas 3072 RELIGION IN ANTIQUITY: THE NEW TESTAMENT. 4 degree credits, \$5072. \$56. (◆\$28)

First-century Israel under Roman rule. Jesus of Nazareth. Earliest Christian communities. Jewish Christianity. Mission to gentiles. Paul the apostle. Beginning of *New Testament*. (Prereq junior. Meets concurrently with 5072. For graduate credit register in 5072)

Fall Qtr Sec 1 Th—6-8:30, FolH 308, Kraabel

(See other courses relating to religion, page 181)

Clas 5005 MADNESS AND DEVIANT BEHAVIOR IN ANCIENT GREECE AND ROME. 4 degree credits, \$60. (◆ \$30)

Analysis of 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. (Prereq 2 cr in Clas. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 T—6-8:30, FolH 202, Erickson

(For further information on Clas 5005, see page 176)

Clas 5007 THE WORLD OF GREECE. 4 degree credits, \$1007. To be offered 1975-76.

Clas 5008 THE WORLD OF ROME. 4 degree credits, \$1008. \$60

See course description Clas 1008. (No prereq. Meets concurrently with 1008, but requires additional work for Upper Division and graduate credit. May be applied toward the CLA foreign language requirement, Route II [see page 61]. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 M—6-8:30, FolH 308, Rochefort

Clas 5072 RELIGION IN ANTIQUITY: THE NEW TESTAMENT. 4 degree credits, \$3072. \$60.

See course description for Clas 3072. (No prereq. Meets concurrently with 3072. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 Th—6-8:30, FolH 308, Kraabel

(See other courses relating to religion, page 000).

Clas 5089 INTRODUCTION TO BIBLICAL ARCHAEOLOGY. 4 degree credits, \$60. (◆\$30)

Survey of archaeological data relevant to the Jewish Scriptures and the New Testament: major sites in "the Holy Land" and in other areas of the Mediterranean and the Near East. The evidence of pottery, inscriptions, manuscripts and coins. Excavation methods. Archaeology as a tool for the study of ancient religions. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 61]. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 Th—6-8:30, FolH 308, Kraabel

Clas 5122 GREEK ART, ARCHITECTURE AND ARCHAEOLOGY: AN INTRODUCTORY COURSE. 4 degree credits, \$1122. \$60.

See course description for Clas 1122. (No prereq. Meets concurrently with 1122. May be applied toward the CLA foreign language requirement, Route II [see page 61]. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 Th—6-8:30, FolH 201, Coulson

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

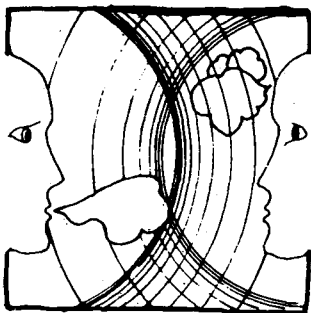
classics—communication skills

Clas 5145 GREEK AND ROMAN MYTHOLOGY. 3 degree credits, \$1045. \$45.

See course description for Clas 1045. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 61]. Meets concurrently with 1045. Qualified students may register for graduate credit at the University of Minnesota).

Fall Qtr Sec 1 M—6-8:30, FolH 308, Hershbell

communication



(See Communication courses in English; Study Skills and Rhetoric)

communications, for health professionals

(See page 297)

communication skills general college (GC)

Fred Amram, Associate Professor
Berenice Bleedorn, Instructor
Evelyn Hansen, Assistant Professor
Alex Kurak, Professor
Vernelle Kurak, Instructor

(For further information on study help, see page 164)

***GC 1401 VOCABULARY BUILDING: HOW TO EXPAND YOUR WORD POWER.** 3 degree credits, \$42. ★

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 W—6:20-8:50, NH 216, A Kurak

Winter Qtr Sec 2 M—6:20-8:50, NH 107, A Kurak

Spring Qtr Sec 3 T—7-9:30, Rich HS 220, A Kurak (Limit 30 students*)

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

communication skills

SKILLS CENTER COURSES (1405, 1409, 1429)

GC 1405 FUNDAMENTALS OF USAGE AND STYLE. 3 degree credits, \$42.

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 Time arr. V Kurak
Winter Qtr Sec 2 Time arr. V Kurak
Spring Qtr Sec 3 Time arr. V Kurak

GC 1409 COMMUNICATION SKILLS: INDIVIDUAL STUDY. 1 degree credit, \$14.

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 Time arr. V Kurak
Winter Qtr Sec 2 Time arr. V Kurak
Spring Qtr Sec 3 Time arr. V Kurak

GC 1429 WRITING: INDIVIDUAL STUDY. 2 degree credits, \$28.

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 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 Time arr. V Kurak
Winter Qtr Sec 2 Time arr. V Kurak
Spring Qtr Sec 3 Time arr. V Kurak

integrated approach to communications

In the following sequence of courses the student becomes aware of communication processes and increases his understanding of relationships between writing and speech. Through interaction in small-group projects and discussion, he learns about his own communication patterns and gains insight into how and why he affects others as he does. He works at developing greater effectiveness in his writing and speaking.

*GC 1413-1414 INTEGRATED COMMUNICATION I. 4 degree credits, \$56.

Student learns about interpersonal communication, with particular emphasis on his own pattern of interaction. Must register for both courses, 2 cr each. (No prereq. Limited to 27 students)

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

*GC 1415-1416 INTEGRATED COMMUNICATION II. 4 degree credits, \$56.

Student considers how communication serves man in his development of community. He studies primary human groups—particularly the family—analyzing how they form and function, develop norms and standards, deal with conflict and tension, and define roles. Must register for both courses, 2 cr each. (No prereq. Limited to 27 students)

Winter Qtr Sec 1 M—6:20-8:50, NH 122, Hansen

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

computer, information, and control sciences

*GC 1471 **CREATIVITY: CREATIVE PROBLEM SOLVING.** 4 degree credits, \$56.

To develop his own creative potential, student explores creative processes and tries to solve his individual problems—personal, academic, or vocational—in imaginative ways. As he works with others in an atmosphere of trust, involvement, and understanding, he becomes aware that individuals approach problems differently, even uniquely; and by shedding his rigidity, he begins to solve his problems more flexibly and productively. (No prereq. Limited to 30 students)

Fall Qtr Sec 1 **T**—6:20-8:50, NH 216, Amram

Winter Qtr Sec 2 **Th**—6:20-8:50, NH 216

Spring Qtr Sec 3 **W**—7-9:30, NH 216

computer, information, and control sciences (CICS)

(Your attention is called to the Undergraduate Development Certificate in Computer, Information, and Control Sciences, 45 and 90 credits)

(See also Management Information Systems)

(Students interested in a degree in Computer Information, and Control Sciences, see page 67)

Donald Boyd, Assistant Professor of Computer, Information, and Control Sciences
Kenneth Brown, Associate Professor of Computer, Information, and Control Sciences

Krzysztof Frankowski, Associate Professor of Computer, Information, and Control Sciences

William Franta, Assistant Professor of Computer, Information, and Control Science

Oscar Ibarra, Associate Professor of Computer, Information, and Control Sciences

Jay A. Leavitt, Associate Professor of Computer, Information, and Control Sciences

Kurt Maly, Assistant Professor of Computer, Information, and Control Sciences

William D. Munro, Professor of Computer, Information, and Control Sciences

Sartaj Sahni, Assistant Professor of Computer, Information, and Control Sciences

Steven Weingart, Assistant Professor of Computer, Information, and Control Sciences

computer, information, and control sciences 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 he took his last 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.

Note: Students with programming experience may apply for a waiver of CICS 1100-1101 or CICS 3101. Students who believe they are eligible should contact Extension Counseling (373-3905).

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

computer, information, and control sciences

CICS 1100-1101 INTRODUCTION TO FORTRAN PROGRAMMING I. 2 degree credits each semester, \$28 plus \$4 special fee. **Total \$32** each semester.

Introduction to computer programming using FORTRAN; elementary-intermediate level applications, including some numerical methods. (Prereq Math 1211 or 1311 or 1611 or concurrent registration in one of these or § for 1100; 1100 for 1101; informal lab)

Fall Sem 1100 Sec 1 T—6-7:10, MainE 203, Frankowski

Spring Sem 1101 Sec 2 T—6-7:10, MainE 203, Leavitt

CICS 1105 FUNDAMENTALS OF ALGORITHMS AND LANGUAGES I. 4 degree credits, \$56 plus \$4 special fee. **Total \$60.**

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)

Fall Sem Sec 1 M—6-7:40, Ex 193, Maly

CICS 1106 FUNDAMENTALS OF ALGORITHMS AND LANGUAGES II. 4 degree credits, \$56 plus \$4 special fee. **Total \$60.**

Algorithms for non-numeric data types. Examples from area of language processors, data structures, string processing. Discussion of suitable languages; SNOBOL. Textual analysis; recursive processes, their implication on languages and their implementations; excursion into artificial intelligence. (Prereq competence in a high level language, algorithmic structures at the level of 1105 or §; informal lab)

Spring Sem Sec 1 M—6-7:40, Ex 193, Sahn

CICS 3001 PERSPECTIVES ON COMPUTERS AND SOCIETY. 4 degree credits, \$56 plus \$4 special fee. **Total \$60.**

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 §)

Fall Sem Sec 1 W—8-9:40, MainE 217, Franta

CICS 3101 A FORTRAN INTRODUCTION TO COMPUTER PROGRAMMING. 4 degree credits, \$56 plus \$4 special fee. **Total \$60.**

Basic FORTRAN computer language with extensions. Programming applications and techniques. The binary number system and elements of computer organization and machine language. Integral laboratory. (Prereq Math 1231 or 1443. Some informal laboratory time is required and will be determined as the class progresses.)

Fall Sem Sec 1 W—6-7:40, Ex 193, Leavitt

Spring Sem Sec 2 W—6-7:40, Ex 193, Frankowski

CICS 5101 STRUCTURE AND PROGRAMMING OF SOFTWARE SYSTEMS I. 4 degree credits, \$3107. \$60 plus \$4 special fee. **Total \$64.**

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 1105 or 3101 or §, informal lab. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 Th—6-8:30, MainE 203, Weingart

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

computer, information, and control sciences

CICS 5102 STRUCTURE AND PROGRAMMING OF SOFTWARE SYSTEMS II. 4 degree credits, \$60 plus \$4 special fee. **Total \$64.**

Subroutine coding conventions, argument transfer, interrupts and traps; macros, I/O equipment and operations; buffers, conditional assembly and program segmentation. (Prereq 5101 or §, informal lab. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **M**—6-8:30, MainE 203, Boyd

CICS 5104 SYSTEM SIMULATION: LANGUAGES AND TECHNIQUES. 4 degree credits, \$60 plus \$4 special fee. **Total \$64.**

Simulation methodology including random number generation, queueing, service-times, discrete random variables, design of experiments. Simulation languages, flow and event oriented; GPSS, SIMULA, SIMSCRIPT. Model building. Applications to job shops, business, operations research and operating systems. (Prereq 3107 or 5101, Stat 3091 or §; informal lab. Qualified students may register for graduate credit at the University of Minnesota)

Spring Sem Sec 1 **T**—6-7:40, Aero 309, Franta

CICS 5121 INTRODUCTION TO DATA STRUCTURES. 4 degree credits. **To be offered 1975-76.**

CICS 5301 NUMERICAL ANALYSIS. 4 degree credits. **To be offered 1975-76.**

CICS 5302 NUMERICAL ANALYSIS. 4 degree credits. **To be offered 1975-76.**

CICS 5400 INTRODUCTION TO AUTOMATA THEORY. 4 degree credits, \$60 plus \$4 special fee. **Total \$64.**

Turing machines, computable functions, unsolvability of the halting problem. Finite state models: equivalence, minimization, synthesis of finite state systems, state assignment, decomposition. Survey of other automata. (Prereq 1106 or §; informal lab. Qualified students may register for graduate credit at the University of Minnesota)

Fall Sem Sec 1 **T**—6-7:40, Aero 309, Ibarra

CICS 5502 INTRODUCTION TO OPERATING SYSTEMS. 4 degree credits, \$60 plus \$4 special fee. **Total \$64.**

Definition and historical development of operating systems. Classification of systems as batch-processing, interactive and real-time systems. Abstractions and implementations of properties common to most systems. Concurrency and related control problems. Resource allocation. Storage allocation. Program modularity. Sharing. Multiplexing. Protection. Performance optimization. (Prereq 5102 or §, informal lab. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **Th**—6-8:30, Arch 50, Boyd

CICS 5503 INTRODUCTION TO COMPILERS. 4 degree credits. **To be offered 1975-76.**

counseling, chemical dependency

(See Chemical Dependency Counseling Certificate, page 80; and Public Health courses)

counseling and student personnel psychology (CSPP)

(See also Education)

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

counseling and student personnel psychology

Gordon Braatz, Assistant Professor of Clinical Psychology
Gayle K. Lumry, Associate Professor of Clinical Psychology
Warren F. Shaffer, Associate Professor of Educational Psychology
W. Wesley Tennyson, Professor of Educational Psychology
Robert G. Warnken, Professor of Psychology

S-N registration not permitted in CSPP unless specifically indicated in course description.

***CSPP 5110 COUNSELING PROCEDURES.** 3 degree credits, \$45.

For persons whose professional work includes counseling and interviewing; not for certification as school counselor. Emphasis on counseling relationship and principles of interviewing; utilizes case studies, role playing and demonstration. (No prereq. Limited to 35 students. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **Th**—7-9:30, Rich HS 220, Shaffer (Limit 30 students*)

Winter Qtr Sec 2 **M**—7-9:30, Bu 125, Shaffer

Spring Qtr Sec 3 **M**—7-9:30, Bu 120, Shaffer

CSPP 5130 INTRODUCTION TO GUIDANCE. 3 degree credits, \$45.

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. (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, Pt 214, Tennyson

***CSPP 5300 WORKSHOP: COUNSELING PSYCHOLOGY.** 3 degree credits this offering (maximum 12 cr) \$45.

For all counselors, teachers and administrators; aspects of intervention theory in relation to psychological principles; counseling; career development, assessment, psychological education and consultation. **Psychological assessment sequence. Fall: The clinical use of ability tests and deficit functioning; Winter: objective personality tests; Spring: projective techniques; in the psychological assessment of adults.** (Limited to 35 students. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **M**—6-8:30, VA Hospital, Lumry, Warnken

Winter Qtr Sec 2 **M**—6-8:30, VA Hospital, Braatz, Warnken

Spring Qtr Sec 3 **M**—6-8:30, VA Hospital, Lumry, Braatz

criminal justice studies (CJS)

Frederick Brown, Attorney, Popham, Haik, Schnobrich, Kaufman & Doty, Ltd.

CJS 5101 CRIMINAL LAW. 4 degree credits, \$60.

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)

Fall Qtr Sec 1 **M**—6:20-8:50, AndH 230, Brown

CJS 5102 CRIMINAL PROCEDURE. 4 degree credits, \$60.

Designed for non-law students. Considers the problems relating to the role of the police in the administration of criminal justice and judicial enforcement of limitations on police practices. Topics: criminal procedure, due process, equal protection of the laws, cruel and unusual punishment, arrest, search and seizure, police interrogation and confessions, double jeopardy, defense of

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

criminal justice studies—design

entrapment, use of informers, right to counsel, rights of the indigent defendant. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 M—7-8:40, BlegH 130
Th—7-8:40, BlegH 125

school of cross disciplinary studies

(See courses in Religious Studies, Social Science and Women's Studies)

danish

(See Scandinavian Languages)

dentistry

For information on non-credit conferences or workshops in dentistry, please contact Dr. Robert D. Jeronimus, Continuing Education in Dentistry, 4 Owre Hall; telephone 373-7960.

design (Dsgn)

(See also ArtS 0003C, 1119, 1121, 3135, 3136)

Your attention is called to the Interior Design Certificate, page 78.

Note: Some classes offered as part of the Interior Design Certificate program may, upon petition, be used on a degree program. Students interested in a degree program should talk to an adviser in the Counseling Department (373-3905).

Alice B. Goacher, Associate Professor of Interior Design

Louise Guerrero, Lecturer in Design

Marla Haapala, Lecturer in Interior Design

Phyllis Halverstadt, Lecturer in Design

Michael J. Hopkins, Design Consultant

***Dsgn 1520 USE OF COLOR** (replaces ArtS 1111). 4 degree credits, \$56.

Basic theory and practical application of color in interior design and architecture. Analysis of color as a creative force in relation to residential and contract design. Problems in color harmony as well as relationship of color to space, form, texture, and light. Emphasis of color use by both the amateur home decorator and the professional. (No prereq. Limited to 25 students)

Fall Sem Sec 1 T—6:20-8:00, McNH 359, St. P Campus, Halverstadt

Spring Sem Sec 2 T—6:20-8:00, McNH 359, St. P Campus, Halverstadt

Sec 3 W—6:20-8:00, McNH 359, St. P Campus, Halverstadt

***Dsgn 1528 LAYOUT FOR INTERIOR DESIGN** (replaces ArtS 1112). 4 degree credits, \$56.

Organization and content of layouts for interior design. Experience in handling tools and materials of drafting, and the use of design principles. Plan view, flat elevation, etc., as helps in presenting ideas used in interior design. (No prereq. Limited to 35 students)

Fall Sem Sec 1 W—6:20-8:00, WuH 240, Hopkins

Spring Sem Sec 2 W—8:15-9:55, WuH 240, Hopkins

See symbols, page 33.

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design

***Dsgn 1555 INTERIOR DESIGN I** (replaces ArtS 3131). 4 degree credits, \$56 plus \$2 special fee. **Total \$58.**

Trends in resources for both residential and commercial use are studied. Basic design principles are applied to projects done by students. The subject matter includes floors and floor coverings, walls and wall coverings, lighting, cabinet woods and their finishes, furniture selection and arrangement, and the creation of a focal point on a room lacking a logical architectural reason. In six of the meetings, part of the class time is used to evaluate and assist students in the preliminary presentation of their projects. Displays of actual materials are arranged for the subject matter under consideration. Slides are used extensively. Demonstrations on how to build a color scheme show the student the importance of texture and color harmony. (No prereq. Limited to 50 students)

Fall Sem Sec 1 **M**—6:20-8:00, Jones 11, Guerrero
Sec 2 **T**—6:20-8:00, McNH 227, StP Campus, Guerrero
Sec 3 **W**—6:20-8:00, Jones 11, Haapala
Sec 4 **Th**—6:20-8:00, Jones 10, Brent
Spring Sem Sec 5 **M**—6:20-8:00, Jones 11, Guerrero
Sec 6 **W**—6:20-8:00, Jones 11, Guerrero
Sec 7 **Th**—6:20-8:00, Jones 12, Brent

***Dsgn 1556 INTERIOR DESIGN II** (replaces ArtS 3132). 4 degree credits, \$56 plus \$2 special fee. **Total \$58.**

Emphasis on the study of decorative fabrics; texture, design, and fiber content; historical background; displays of current fabrics and new wall coverings; studies of the work of designers; major accessories, including the use of fine arts; selection of lamps and hardware; how to display collections and add interior touches which add personality; window treatment and how to estimate yardage; work with color schemes; demonstration of elevation drawing; one field trip and several talks by practicing designers. (Prereq 1555 and ArtS 1119. Limited to 50 students)

Fall Sem Sec 1 **W**—6:20-8:00, Jones 10, Guerrero
Spring Sem Sec 2 **T**—6:20-8:00, McNH 227, StP Campus, Guerrero

Dsgn 3512 HISTORY OF TRADITIONAL FURNITURE (replaces ArtS 3137). 4 degree credits, \$56 plus \$5 course fee. **Total \$61.**

Furniture from its earliest forms to the present with emphasis on the 17th through the 19th centuries in France, England, and the United States. Includes study of Shaker, Southwest Pueblo and American Indians; antiquity; Middle Ages; Renaissance; and the Germanic nations. The course will conclude with a study of the modern period and current trends. Availability of forms and use in contemporary interiors discussed. (no prereq)

Spring Sem Sec 1 **Th**—6:20-8:00, Jones 11, Haapala

***Dsgn 3555 SEMINAR IN INTERIOR DESIGN.** (replaces ArtS 5111). 4 degree credits, \$56 plus \$5 special fee. **Total \$61.**

Advanced study of the elements and principles of 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 field trips. (Prereq 1555, 1556 and ArtS 1119. Limited to 25 students. No auditors)

Fall Sem Sec 1 **T**—6:20-8:00, Jones 11, Brent

***Dsgn 3556 SEMINAR IN INTERIOR DESIGN.** (replaces ArtS 5112). 4 degree credits, \$56 plus \$5 special fee. **Total \$61.**

An intensive application, for advanced Interior Design projects, of the information and skills acquired in Dsgn 1555, 1556, and 3555. Class time will be used to study architectural symbols and their usage in Interior Design construction;

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

design—east asian languages

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 3555 and ArtS 1119, 1121. Limited to 25 students. No auditors)

Spring Sem Sec 1 **M**—6:20-8:00, Jones 10, Brent

Degn 3560-3561 INTERIOR DESIGN CLINIC (replaces ArtS 5113, 5114). 4, 5 or 6 degree credits each semester. \$56, \$70 or \$84 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. Special emphasis on the designer's responsibility to this environment and his 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. (Prereq §)

Fall Sem 3560 Sec 1 **Time arr.** First class meeting, Monday Sept. 23, 8:15, WuH 240, Hopkins

Spring Sem 3561 Sec 2 **Time arr.** First class meeting, Monday, Feb. 10, 8:15, WuH 240, Hopkins

***Degn 3577-3578 CONTRACT DESIGN SEMINAR** (replaces ArtS 3133-3134). 4 degree credits each semester, \$56 each semester.

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 1556 and 1528 or § for 3577; 3577 for 3578. Limited to 25 students)

Fall Sem 3577 Sec 1 **M**—6:15-8:00, WuH 240, Hopkins

Spring Sem 3578 Sec 2 **M**—8:15-9:55, WuH 240, Hopkins

Other credit courses—see College of Home Economics, page 227.

distributive education

(See Vocational Education)

drug abuse

(See Public Health and PsyF 5176, Psychology of Drug Abuse)

dutch

(See German)

east asian languages

Edward M. Copeland, Professor of East Asian Languages

Kaye Matsumoto, Lecturer in East Asian Languages

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

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

east asian languages

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.-8 p.m., Monday-Thursday; 8 a.m.-6 p.m., Friday; 9 a.m.-3 p.m., Saturday; closed Sunday.

chinese (Chn)

The following non-language classes may be applied toward the CLA foreign language requirement, Route II (see page 61); ArtH 5765; Hist 3467, 5467; Eas 1001-1002.

Chn 1005-1006 BEGINNING SPOKEN MANDARIN. 3 degree credits. To be offered 1975-76.

japanese (Jpn)

The following non-language classes may be applied toward the CLA foreign language requirement, Route II (see page 61); Hist 3471, 3472, 5471; Eas 1001-1002.

Jpn 1005-1006 BEGINNING SPOKEN JAPANESE. 3 degree credits each semester, \$42 plus \$3 course fee. Total \$45 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 1 for 1006)

Fall Sem 1005 Sec 1 M—6:20-8:00, FolH 304, Copeland

Spring Sem 1006 Sec 2 M—6:20-8:00, FolH 302, Copeland

east asian studies (Eas)

Eas 1001 THE EAST ASIAN HERITAGE: EARLY PERIOD. 4 degree credits, \$56. (♦ \$28.)

A general introduction to the cultures of the East Asian Area through the study of representative works of national expression. (No prereq. May be applied toward the CLA foreign language requirement, Route II(see page 61))

Fall Sem Sec 1 T—6:20-8:00, Jones 1, Matsumoto

Eas 1002 THE EAST ASIAN HERITAGE: MODERN PERIOD. 4 degree credits, \$56. (♦ \$28.)

A general introduction to the cultures of the East Asian area through the study of representative works of national expression. (No prereq. May be applied toward the CLA foreign language requirement, Route II(see page 61))

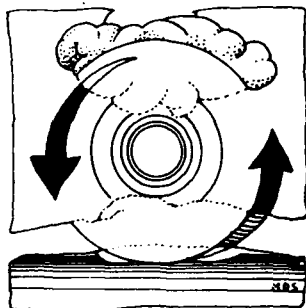
Spring Sem Sec 1 T—6:20-8:00, Jones 1, Matsumoto

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

ecology and behavioral biology—economics

ecology and behavioral biology (Ecol)



Robert J. Taylor, Assistant Professor of Ecology and Behavioral Biology

Ecol 3001 INTRODUCTION TO ECOLOGY. 4 degree credits, §1003, 1004, 3004, Biol 1104, 3041. \$56.

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.

Fall Qtr Sec 1 Th—6:20-9:50, Taylor
Lect—Arch 50,
Dis—Arch 15, 30, 45, 60

(See other environmental courses, page 171)

economics (Econ)

Edward Coen, Professor of Economics

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. \$56 each semester.★

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**)

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

MINNEAPOLIS CAMPUS, WEST BANK

Fall Sem 1001	Sec 1	M—6:20-8:00, BlegH 105
	Sec 2	T—6:20-8:00, BlegH 210
	Sec 3	T—6:20-8:00, BlegH 125
	Sec 4	W—6:20-8:00, BlegH 130
	Sec 5	W—6:20-8:00, BlegH 145
	Sec 6	Th—6:20-8:00, BlegH 125
	Sec 7	Th—6:20-8:00, BlegH 110
	Sec 8	Th—8:15-9:55, BlegH 210
	Sec 9	S—9:30-11:10 a.m., BlegH 125
1002	Sec 10	T—8:15-9:55, BlegH 340
	Sec 11	Th—6:20-8:00, BlegH 425
	Sec 12	Th—6:20-8:00, BlegH 435
	Sec 13	Th—8:15-9:55, BlegH 425
Spring Sem 1001	Sec 14	T—6:20-8:00, BlegH 105
	Sec 15	Th—6:20-8:00, BlegH 255
	Sec 16	Th—8:15-9:55, BlegH 255
1002	Sec 17	M—6:20-8:00, BlegH 115
	Sec 18	T—6:20-8:00, BlegH 240
	Sec 19	T—8:15-9:55, BlegH 240
	Sec 20	W—6:20-8:00, BlegH 105
	Sec 21	S—9:30-11:10 a.m., BlegH 105

KELLOGG HIGH SCHOOL

Fall Sem 1001	Sec 22	M—6-7:40, Kel HS 155
Spring Sem 1002	Sec 23	M—6-7:40, Kel HS 155

SANDBURG JUNIOR HIGH SCHOOL

Fall Sem 1001	Sec 24	T—6:20-8:00, Sand JHS 209
1002	Sec 25	T—8:15-9:55, Sand JHS 209
Spring Sem 1002	Sec 26	T—6:20-8:00, Sand JHS 209
1001	Sec 27	T—8:15-9:55, Sand JHS 209

RICHFIELD SENIOR HIGH SCHOOL

Fall Sem 1001	Sec 28	M—6:20-8:00, Rich HS 183-185
Spring Sem 1002	Sec 29	M—6:20-8:00, Rich HS 183-185

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 5031-5032 CURRENT ECONOMIC ISSUES**
- Econ 5611 ECONOMICS OF ENVIRONMENTAL CONTROL**
- Econ 5621 ECONOMICS OF URBAN PROBLEMS**

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

economics

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	3751	3701-5701
Public Finance	3851	3801

general economics

Econ 3021 SURVEY OF ECONOMIC IDEAS. 3-5 degree credits, \$42-\$70. (◆\$21)

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—6:20-8:00, BlegH 205, Smith

Econ 5021 ECONOMICS, ETHICS, AND ECONOMIC PHILOSOPHY. 3-5 degree credits. To be offered 1975-76.

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 5031 CURRENT ECONOMIC ISSUES. 3-5 degree credits. To be offered 1975-76.

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. \$56.

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—8:15-9:55, BlegH 425

Sec 2 T—6:20-8:00, BlegH 425, Richter

Sec 3 T—8:15-9:55, BlegH 435, Richter

Sec 4 W—6:20-8:00, BlegH 425, Simler

Spring Sem Sec 5 T—8:15-9:55, BlegH 425, Richter

Sec 6 W—8:15-9:55, BlegH 425

See symbols, page 33.

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***Econ 3102 MACROECONOMIC THEORY.** 4 degree credits, \$3105. \$56.*

Factors determining consumption, investment, national income, employment, and the price level. (Prereq 3101 or §. Limited to 35 students)

Fall Sem Sec 1 **W**—8:15-9:55, BlegH 420, Simler

Spring Sem Sec 2 **M**—8:15-9:55, BlegH 420

Econ 3131 WELFARE ECONOMICS. 4 degree credits, \$56.

Introduction to welfare economics. Economic efficiency and the conditions necessary to sustain it. Conflicts between the efficiency and income distribution goals. How market structure and public policies increase or decrease efficiency. (Prereq 3101 or §)

Spring Sem Sec 1 **T**—6:20-8:00, BlegH 255, Richter

development and area studies

Econ 5301 and 5331 ECONOMIC DEVELOPMENT. 4 degree credits. **To be offered 1975-76.**

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)

Econ 5307 and 5337 COMPARATIVE ECONOMIC SYSTEMS. 4 degree credits, \$60.

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**—8:15-9:55, BlegH 205, Smith

international economics

Econ 5401 and 5431 INTERNATIONAL ECONOMICS. 4 degree credits, \$60.

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)

Fall Sem Sec 1 **Th**—8:15-9:55, BlegH 105, Smith

See symbols, page 33.

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economics

labor economics

Econ 3501 and 3551 LABOR ECONOMICS. 4 degree credits, \$56. (♦ \$28.)

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 3551. The courses meet concurrently, but only one can be taken for credit)

Fall Sem Sec 1 W—6:20-8:00, BlegH 210, Turnbull

(See also IR 3002, Modern Labor Relations)

Econ 5534 ECONOMIC SECURITY. 4 degree credits, \$60. (♦ \$30)

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—6:20-8:00, BlegH 210, Turnbull

Econ 5537 LABOR MARKET BEHAVIOR AND REGULATION. To be offered 1975-76.*

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 1974-75.**

Analysis of important labor problem areas. Current issues will be examined in light of their broader economic, legal, political and social implications. (Prereq 3501 or equiv or §. Qualified students may register for graduate credit at the University of Minnesota)

industrial organization

Econ 3601 and 3651 INDUSTRIAL ORGANIZATION AND ANTI-TRUST POLICY. 4 degree credits, \$56.

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)

Fall Sem Sec 1 T—8:15-9:55, BlegH 255

***Econ 5611 ECONOMICS OF ENVIRONMENTAL CONTROL.** 4 degree credits, \$60.

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)

Spring Sem Sec 1 M—6:20-8:00, BlegH 230, Coen

(See other environmental courses, page 171).

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

economics—education

*Econ 5621 ECONOMICS OF URBAN PROBLEMS. 4 degree credits, \$60.

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)

Fall Sem Sec 1 M—6:20-8:00, BlegH 425, Coen

money and banking

Econ 3751 MONEY AND BANKING. 4 degree credits, \$3701, 5701. \$56. ★

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 §)

Spring Sem Sec 1 Th—6:20-8:00, BlegH 205, Smith

Econ 3701 and 5701 MONEY, BANKING, AND MONETARY POLICY. 4 degree credits. To be offered 1975-76.

(Prereq 1001, 1002. Not open to Econ majors, who should take 3751 which is also offered alternate years).

public finance

Econ 3801 and 3851 ELEMENTS OF PUBLIC FINANCE. 4 degree credits, \$56.

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 3851. The courses meet concurrently but only one can be taken for credit)

Fall Sem Sec 1 T—6:20-8:00, BlegH 260

education

Prospective Teachers: Persons interested in undergraduate programs preparing them to teach in elementary or secondary schools should make an appointment through the Extension Counseling Department (373-3905) with an adviser in the College of Education. 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 is an extensive offering in the late afternoon and Saturday morning hours as part of the day school program of the College of Education. For the **Late Afternoon and Saturday Bulletin**, contact the College of Education Career Development office, 1425 University Ave. S.E., University of Minnesota, Minneapolis, Minnesota 55455 (373-2257).

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education

Renewal of Teaching Certificates: Former teachers wishing to renew certificates should check with the State Department of Education concerning their individual requirements. (See also Educ 5305 WORKSHOP IN HUMAN RELATIONS, page 158).

Please see the following departmental listings for all College of Education course offerings:

art education (page 111)

Experiences with Pictorial Expression, ArEd 1207
Experiences with Design, Materials, ArEd 1208
Survey of Art Activities, ArEd 3001
Weaving Without A Loom, ArEd 3009
Contemporary Crafts, ArEd 3020
Puppetry, ArEd 3030
Art Media Techniques (Book binding) ArEd 5050
Art Media Techniques (Textile Design) ArEd 5050

child psychology (page 134)

Child Psychology, CPsy 3301
Adolescent Psychology, CPsy 5303
Behavior Problems, CPsy 5311
Psychology of Atypical Children, CPsy 5313
Introduction to Mental Retardation, CPsy 5315
Clinical Procedures With Children, CPsy 5319
Processes of Socialization of Children, CPsy 5331

counseling and student personnel psychology (page 144)

Counseling Procedures, CSPP 5110
Introduction to Guidance, CSPP 5130
Workshop: Counseling Psychology (Psychological Assessment Sequence), CSPP 5300

higher education and teacher education (page 158)

Workshop in Human Relations, Educ 5305

educational administration (page 158)

elementary education (page 193)

Workshop: Curriculum Laboratory Practice, Elem 5103

music education (page 271)

Workshop: ORFF Schulwerk for teachers MuEd 5750
Workshop: Seminar on the Physics of Brass Instruments, MuEd 5750
Workshop: Orchestral Conducting Problems, MuEd 5750
Workshop: String Repair, MuEd 5750
Workshop: Cello Pedagogy, MuEd 5750
Workshop: Music For Early Childhood, MuEd 5750

physical education and recreation (page 279)

Water Safety Instructor's Course, PE 1800
Prevention and Care of Injuries, PE 3114
Coaching Women in Competitive Sports, PE 3161

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

Basketball Coaching, PE 3171
Practicum: Prevention and Care of Athletic Injuries, PE 5620
Workshop: Dance in Education (Creative Dance for Children), PE 5700
Workshop: Dance in Education (Non-Partner Folk Dance), PE 5700
Workshop: Dance in Education (Modern Dancing Techniques) PE 5700
Workshop: Dance in Education (Teaching of Folk Dance) PE 5700
Swimming for Men and Women, PE 0250
Scuba for Men and Women, PE 0255
Golf for Women, PE 0200
Golf for Men and Boys, PE 0150
Swimming for Children, PE 0001
Springboard Diving for Boys and Girls, PE 0100

psychological foundations (page 288)

Introductory Statistical Methods, PsyF 5110
Educational Measurement in the Classroom, PsyF 5120
Psychology of School Learning, PsyF 5141
Psychology and Pedagogy of Reading, PsyF 5148
Personality and Social Development, PsyF 5162
Social Psychology of Education, PsyF 5170
Psychology of Drug Abuse, PsyF 5176
Computer Programming, PsyF 5330
Practicum: Behavior Analysis and Precise Personal Management, PsyF 5641

school health education (page 304)

Driver Education I, Hlth 5100
Driver Education II, Hlth 5101
Safety Education, Hlth 5130
Family Life and Sex Education in Elementary Schools, Hlth 5350
The Driver Simulator, Hlth 5602

secondary education (page 305)

Family Life Education, SeEd 5112
Teacher Self-Appraisal Observation Systems, SeEd 5171
Methods of Teaching English as a Second Language, SeEd 5396

pecial education (page 316)

Childhood Language Development: Classroom Implications, SpEd 5100
Education of Learning-Disabled Children, SpEd 5112
Education of Emotionally Disturbed and Socially Maladjusted Children, SpEd 5150
Introduction to Education of Visually Handicapped Children, SpEd 5170
Contingency Management in Special Education Systems, SpEd 5301

vocational and technical education (page 322)

includes departments of:
Agriculture Education
Business Education
Distributive Education
Home Economics Education
Industrial Education
Vocational Education

See also ForP 5405, PAPER IN TODAY'S WORLD; FRD 5402, INTERPRETATION AND MANAGEMENT OF FOREST ENVIRONMENTS; FRD 5403, FUNDAMENTALS OF NATURAL RESOURCE EDUCATION; Geo 5051, PHYSICAL GEOLOGY FOR

See symbols, page 33.

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education

TEACHERS; Geo 5052, HISTORICAL GEOLOGY FOR TEACHERS; Hort 5020, HORTICULTURE TECHNIQUES FOR EDUCATION MAJORS; Math 5005-5006, TOPICS IN THE MATHEMATICS OF PRIMARY SCHOOLS; Phil 5324, ETHICS AND EDUCATION; Ling 5721, ENGLISH AS A SECOND LANGUAGE; Th 5131, CREATIVE DRAMATICS)

higher education and teacher education (Educ)

(See also Education)

George Redman, Director In-Service Human Relations

*Educ 5305 **WORKSHOP IN HUMAN RELATIONS.** 6 degree credits, \$CSPP 5305. \$90 plus \$5 special fee. **Total \$95.**

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. (Prereq in-service teacher. Students may register S-N Limited to 30 students. Approved to meet State Department of Education Edu 521 requirement for re-certification. Qualified students may register for graduate credit at the University of Minnesota)

- Fall Qtr** Sec 1 **M**—4:30-9:30, Aero 309
Sec 2 **T**—4:30-9:30, Aero 225
Sec 3 **W**—4:30-9:30, McNH 103, StP Campus
Sec 4 **Th**—4:30-9:30, McNH 103, StP Campus
- Winter Qtr** Sec 5 **M**—4:30-9:30, McNH 103, StP Campus
Sec 6 **T**—4:30-9:30, McNH 103, StP Campus
Sec 7 **W**—4:30-9:30, Aero 309
Sec 8 **Th**—4:30-9:30, Aero 309
- Spring Qtr** Sec 9 **M**—4:30-9:30, Aero 309
Sec 10 **T**—4:30-9:30, FolH 308
Sec 11 **W**—4:30-9:30, McNH 103, StP Campus
Sec 12 **Th**—4:30-9:30, McNH 103, StP Campus

EDUCATIONAL ADMINISTRATION (EdAd)

(See also Education)

A wide variety of workshops in educational management is available to local school districts who wish to jointly design a continuing education experience to meet unique local staff needs. Workshop components available include: staff development, personnel evaluation, fiscal budgetary planning, needs assessment, leadership skill development, program-oriented budgeting, educational law, program planning and evaluation, and other specific training areas.

For further information in regard to planning an individually designed workshop for a particular district or building staff contact: Chairman, Division of Education Administration, University of Minnesota, 225 Health Services Building, St. Paul, Minnesota 55101 or call (612) 373-5836. S-N registration not permitted in Educational Administration unless specifically indicated in course description.

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electrical engineering (EE)

(See also Professional Development Recognition Program in Engineering and Science, page 194; and Math 3061, Operational Methods for Linear Systems).

- Gale R. Allen, Control Data Corp.*
- Paul A. Cartwright, Professor of Electrical Engineering*
- Dave Lo, Staff Physicist, Univac*
- Robert Oswald, Principal Engineer, Univac*
- Dennis Prestholt, Manager, Circuits Development, Control Data Corp.*
- Charles Tolman, Manager, Production Engineering, Univac*

The curriculum leading to the Bachelor of Electrical Engineering degree (B.E.E.) is described in the *Bulletin of the Institute of Technology*. The first three years of the curriculum can be obtained in Extension Classes. See chart on page 66.

Your attention is called to the Undergraduate Development Certificate in Electrical Engineering—90 credits, page 92; and to the Undergraduate Development Certificate in Electrical Engineering—135 credits, page 93.

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.

(Students interested in a degree in Electrical Engineering, see page 66.)

EE 0001 REFRESHER COURSE FOR ELECTRICAL ENGINEERS. No credit. To be offered 1975-76.

Review of electrical engineering fundamentals and applications. (prereq Bachelor's degree in Engineering, Physics, or Mathematics)

(See also refresher courses in engineering fundamentals, page 194; civil engineering, page 136; mechanical engineering, page 261.)

EE 0070C, 0071C ENGINEERING EMPLOYMENT. 1-3 certificate credits each semester (maximum 6 cr). \$14 per credit.

(Prereq completion of at least 45 cr and # for 0070C and completion of at least 90 cr and # for 0071C. Interested students should contact Paul Cartwright, 105 MainE, 373-2972. Cannot be used retroactively. Requires a technical report at end of each semester. Declaration of intent must be filed at time of registration—obtain forms from an Extension Classes office)

- Fall Sem 0070C** Sec 1 Time arr. Cartwright
- Fall Sem 0071C** Sec 2 Time arr. Cartwright
- Spring Sem 0070C** Sec 3 Time arr. Cartwright
- Spring Sem 0071C** Sec 4 Time arr. Cartwright

EE 1510 ELEMENTS OF ELECTRICAL ENGINEERING. 5 degree credits, \$70.

Physical principles underlying the modeling of circuit elements. Characterization of two- and three-terminal resistive elements. Kirchhoff's laws. Analysis of simple resistive circuits. Linearity in circuits. Characterization of storage elements. First order circuits. (Prereq Phys 1291, Math 3221 or 3066)

- Spring Qtr** Sec 1 **Lect MW**—6-7:30, Arch 50
- Lab M or W**—7:40-9:20

EE 3010 CIRCUITS, SIGNALS AND SYSTEMS I. 4 degree credits, \$56.

Modeling of lumped parameter networks. Second order circuits. Sinusoidal steady-state analysis. Two port networks. (Prereq 1510)

- Fall Qtr** Sec 1 **Lect M**—6-8:30, MechE 102. **Rec arr.**

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

electrical engineering

- N** **EE 3011 CIRCUITS, SIGNALS AND SYSTEMS II.** 4 degree credits, \$56.
E Fourier methods of analysis. Laplace transforms and applications. Frequency and
W time domain responses. (Prereq 3010)
Winter Qtr Sec 1 **Lect M**—6-8:30, MechE 108. **Rec arr.**
- N** **EE 3012 CIRCUITS, SIGNALS AND SYSTEMS III.** 4 degree credits, \$56.
E Continuous, discrete-time systems. Feedback: stability, applications. (Prereq 3011)
W **Spring Qtr** Sec 1 **Lect M**—6-8:30, MechE 108. **Rec arr.**
- EE 3050-3051 ELECTRONICS I-II.** 4 degree credits each quarter, \$56 each quarter.
3050: Introduction to physical principles of electronic devices; electrical properties of metals, insulators, and semi-conductors. Semi-conductor, vacuum, and gaseous devices; modeling. **3051:** Piecewise linear and incremental models, biasing, operating characteristics of active devices in single-stage circuits; applications of diodes for rectification, clipping, and clamping. (Prereq 3010-3011 or §, 13400-3401 or §)
Fall Qtr 3050 Sec 1 **Lect W**—6-8:30, Rec arr. MechE 102
Winter Qtr 3051 Sec 2 **Lect W**—6-8:30, Rec arr. MechE 102
- EE 3100-3101 ELECTROMAGNETIC FIELDS I, II.** 4 degree credits each quarter, \$56 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 1 with §)
Fall Qtr 3100 Sec 1 **Lect T**—6-8:30, MechE 108. **Rec arr.**
Winter Qtr 3101 Sec 1 **Lect T**—6-8:30, MechE 108. **Rec arr.**
- EE 3400-3401 JUNIOR ELECTRICAL ENGINEERING LABORATORY.** 3 degree credits, \$42 plus \$10 special fee. **Total \$52.**
Experimental study of electronic circuits. (Prereq 13050-3051)
Fall Qtr 3040 Sec 1 **4 class hours per week.** Time arr. at first meeting of 3050.
Winter Qtr 3041 Sec 2 **4 class hours per week.** Time arr. at first meeting of 3051.
- EE 3402 JUNIOR ELECTRICAL ENGINEERING LABORATORY.** 2 degree credits, \$28 plus \$10 special fee. **Total \$38.**
Experimental study of electronic circuits. (Prereq 15050)
Spring Qtr Sec 1 **4 class hours per week.** Time arr. at first meeting of 5050.
- EE 5050 NONLINEAR ELECTRONIC CIRCUITS.** 4 degree credits, \$60.
Nonregenerative switching circuits, diode and transistor logic circuits; multivibrators, oscillators. (Prereq 3051, 13402. May not be taken for graduate credit)
Spring Qtr Sec 1 **Lect W**—6-8:30, Rec arr. MechE 102
- EE 5055 LINEAR ELECTRONIC CIRCUITS.** 4 degree credits, \$60.
Multistage, untuned, small-signal amplifiers. Feedback amplifiers. Untuned power amplifiers. Regulated power supplies. Lectures will be presented by video tape. Classroom instructor in attendance for both lecture and recitation. (Prereq 3051, 3012 or 13012 or 5001. Qualified students may register for graduate credit at the University of Minnesota)
Fall Qtr Sec 1 **Lect M**—6-8:00, Arch 30
Lect and Rec W—6-9:15, Arch 30
- N** **EE 5100 ELECTROMAGNETIC FIELDS III.** 4 degree credits, \$60.
E Plane-wave propagation, transmission lines, antennas, and other topics. (Prereq
W 3101)
Spring Qtr Sec 1 **Lect T**—6-8:30, Aero 255. **Rec Arr.**

(course descriptions continue on page 193)

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

of special interest

*Brighten your leisure hours—
Take a University course at
reduced tuition*

If you want to explore a topic of personal interest but don't want to compete for grades or be evaluated, this is the opportunity you've been waiting for.

Hundreds of regular Extension classes are open under three reduced-tuition plans for "no-credit registration:" **Half-price plan, plus-60 plan and youth plan.**

As a participant in a reduced-tuition plan, you may keep up with readings and may take an active role in class discussions.

All nonlimited classes open for reduced tuition are identified by a diamond ♦ which appears after the number and course title in **course offerings**. For complete information, see page 32.

Free* services—help yourself

Continuing Education and Extension's professional counselors and program advisers are ready to help direct your interests, and to help you formulate your educational-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 my courses?

. . . stop by 314 Nolte Center or call 373-3905

Advisers and counselors are available (without appointment) during registration hours (page 9-19), during the regular daytime hours (page 21), and evening hours (by appointment only) Monday through Thursday evenings until 8 p.m.

Also ask about:

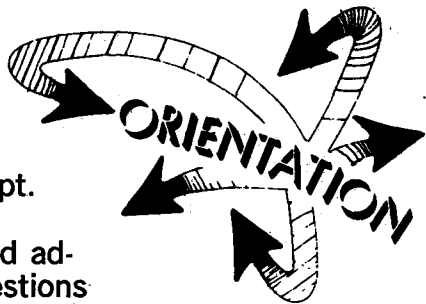
Fall meetings for degree candidates in the College of Liberal Arts, and Business Administration.

Individual appointments with advisers from the General College, Colleges of Education and Business Administration, and the Institute of Technology.

* A battery of tests for learning more about abilities, interests, educational and vocational planning costs students \$25, non-students \$50.

To find out more about Extension Classes, attend an informal coffee-talk session in the Nolte Center Lounge: Thursday, Sept. 5, 5 to 8 p.m.

Staff, faculty, counselors and advisers will answer your questions about the University. Join a tour of the campus or of Wilson Library. Call 376-7500 and request a map of campus building and parking facilities.

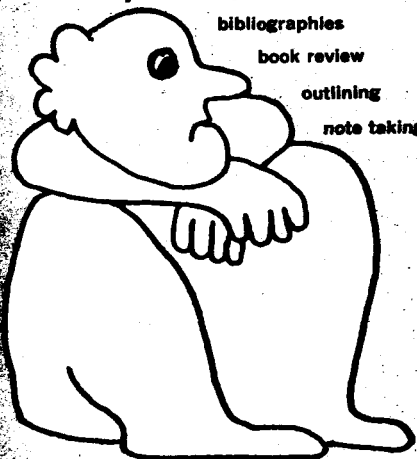


NEED TO IMPROVE YOUR STUDY SKILLS?

Get help at the Extension Classes Reading and Writing Skills Center. Walk into 109 Nicholson Hall any **MONDAY, TUESDAY, WEDNESDAY** and **THURSDAY** 9 a.m. to 3 p.m. and 5 p.m. to 8 p.m. **FRIDAY** 9 a.m. to 3 p.m., for any kind of reading or writing assistance.

Those who need basic instruction in reading should call the Reading and Study Skills Center, 101 Eddy Hall (373-4193) between 8 a.m. and 4:30 p.m. for an evening appointment.

research writing reading
grammar spelling
vocabulary footnoting theme writing
bibliographies
book review
outlining
note taking



Also:

Skilled tutors to help you

Free services for registered Extension students

Credit courses to improve communication skills:

FUNDAMENTALS OF USAGE AND STYLE (General College 1405)

COMMUNICATION SKILLS: INDIVIDUAL STUDY (General College 1409)

WRITING: INDIVIDUAL STUDY (General College 1429)

(See Communications Skills)



**Why not
join them?**

Extension Classes Student Board carries Extension students' concerns to University faculty and administrators. The results? Improvement in campus lighting, evening bookstore hours, lower evening parking fees and much more.

This Board keeps informed about what's happening at the University so they can best represent the Extension student body.

If you want to help, join the Board at anytime during the year (current registration in Extension Classes is the only requirement). Call 376-7500 for more information.

(Extension students may also serve on the University Senate, the primary academic governing body of the University. For more information on the Board and the Senate, see pages 52-53.)

TV Guide TV Guide TV Guide

Earn University degree credit at home

Registration is easy

Call 373-3195 and request registration forms (during nonlimited mail registration periods, pages 9-19). Mail them, along with tuition and fees, to 101 Westbrook Hall, through the second week of the TV class without a late fee (how to register by mail, page 36).

Home viewers not wishing to register for credit may purchase a study guide from Extension Classes.

Information on 1974-75 New York University fall and spring "Sunrise Semester" courses (broadcast on WCCO, Channel 4) was not available as this Bulletin went to press. Call 373-3195 for a current listing of these courses — approved for University of Minnesota credit.

PSYCHOLOGY OF DEATH (Sociology 5956—4 cr) examines the issues and problems which surround mortality: society's denial of death, the dying patient, grief, social recuperation, the funeral, ethical issues, and more.

Runs Sept. 23, Monday, 9-10 p.m. (KTCA, Ch. 2) **Network**

PSYCHOLOGY AND DRUG ABUSE (Psychology Foundations 5176—3 cr) confronts the psychological and sociological problems of drug abuse. It focuses on drug use and abuse patterns, personal values, causes of use and abuse, drug education, laws, rehabilitation, and more.

Runs Sept. 24, Tuesday, 7:30-8 p.m. (KTCA, Ch 2) **Network**

AMERICAN POPULAR MUSIC (Music 5711—4 cr) examines popular music in the United States during the 19th century. It includes ethnic music; technology in music; social dance music; parlor songs; vaudeville; shop songs; theatre music; Civil War music, and more. Registrants will be expected to attend four live performances.

Runs Jan. 6, Monday, 9-10 p.m. (KTCA, Ch 2)

DYNAMICS OF MARRIAGE AND PARENTHOOD (LIVING MARRIED) (Family Social Science 1002—2 cr) is a series created to help people achieve greater self-awareness, a happy marriage and successful parenthood.

Runs Jan. 7, Tuesday, 7:30-8 p.m. (KTCA, Ch. 2) **Network**

HISTORY OF CIVIL LIBERTIES AND CIVIL RIGHTS IN THE UNITED STATES (History 3835, 5335—4 cr) traces the development and protection of and perils to individual and personal freedom in modern America. Liberty, justice and equality are examined within America's diverse, bureaucratic society.

Runs March 31, Monday, 9-10 p.m. (KTCA, Ch 2)

POLITICAL POLITICS (General College 1222, 0, 3 or 5 cr) shows how individual citizens can use political "tools" and the present political systems to shape their future. Some topics: individual political action, formal party organization, alternative actions, and others.

Runs April 1, Tuesday, 7:30-8 p.m. (KTCA, Ch 2)

For complete information, see the course descriptions under course offerings.



**Make
A
Noise!**

We want to hear from you. Tell us your ideas for improving Extension Classes programs. We will seriously consider all suggestions.

START NOW

Clip out the form below, fill it in, drop it in an envelope, and mail it to Extension Classes, 170 Wesbrook Hall, University of Minnesota, Minneapolis, MN 55455. (For a personal reply, please include your name, address and telephone number.)

Sound-off about Extension Classes

Name _____

Address _____


Telephone number _____

An Introduction to Psychical Phenomena

An inquiry into the existence of human powers to foresee the future, move bodies at will, communicate with the dead, and other strange but wondrous mysteries of the human mind (Social Science 3521).

**Economists understand but can't manage the
\$ economy. Why not learn to manage your
budget even if you don't understand the
Economy?**

**As a service to its students, Extension Classes
is offering a short-term course in MONEY
MANAGEMENT (Extension Classes 0001).**



Travel more economically to classes. Join Extension Classes' car pool service (page 41).

Call 373-3195 for the day-by-day guide of Extension classes located at the suburban and campus locations.

Register for nonlimited Extension classes the convenient way — by mail (page 36).

Learn about the College of Liberal Arts Honors Program, and other honors opportunities open to Extension students (pages 63, 65).

Get a head start. Purchase textbooks and supplies before classes begin (page 23).



Planet earth

How well are we treating her?

Pollution has troubled her since 79 A.D., population growth is affecting her physical well being, and her inhabitants have mental health problems.

Find out what we are doing to help her, in INTRODUCTION TO AIR POLLUTION PROBLEMS (Public Health 5181), BIOLOGY AND THE FUTURE OF MAN (Biology 3051), and MAN AND HIS ENVIRONMENT (General College 1112)

For related courses, see these departments in **course offerings**: American Studies, Architecture, Biology, Botany, Civil Engineering, Business Administration, Design, Ecology, Economics, Food Science and Nutrition, Forest Resources Development, Forest Products, General College, Geography, Geology, Horticulture, Landscape Architecture and Public Health.

Minnesota

Do you know why Minnesota has ranked high in quality of life?

Can you name Minnesotans who have made significant contributions to American music, art, literature, architecture and higher education?

Explore what's near — find out what makes Minnesota special.

Other Continuing Education and Extension Opportunities

COMMUNITY PROGRAMS helps individuals often denied the opportunity for higher education to obtain college class experience.

Many credit courses are offered for low or no tuition in selected Twin Cities areas. For further information, call 376-7401 or write Department of Community Programs, 305 Wesbrook Hall, University of Minnesota, Mpls., MN 55455.

EXTENSION INDEPENDENT STUDY offers individuals the chance to study at their own pace whenever and wherever they want. Most courses may be taken for University credit, or are applicable to a variety of University Extension certificates. For further information on courses (including newspaper and radio credit courses) call 373-3256 or write Department of Independent Study, 45 Wesbrook Hall, University of Minnesota, Mpls., MN 55455.

CONTINUING EDUCATION FOR WOMEN includes courses for University degree credit programs, workshops for special skills, noncredit courses to meet specific requests and Sunday night seminars. Classes are held at several locations in the Twin Cities. For complete information, call 373-9743 or write Department of Continuing Education for Women, 200 Wesbrook Hall, University of Minnesota, Minneapolis, MN 55455.

Learn what factors determine woman's destiny in American society.

PSYCHOLOGY OF WOMEN (Psychology 5141) uses empirical research to examine physical and psychological differences and/or similarities between the sexes, and environmental influences which modify women's personality and intellectual development.

How have women been represented in literature?

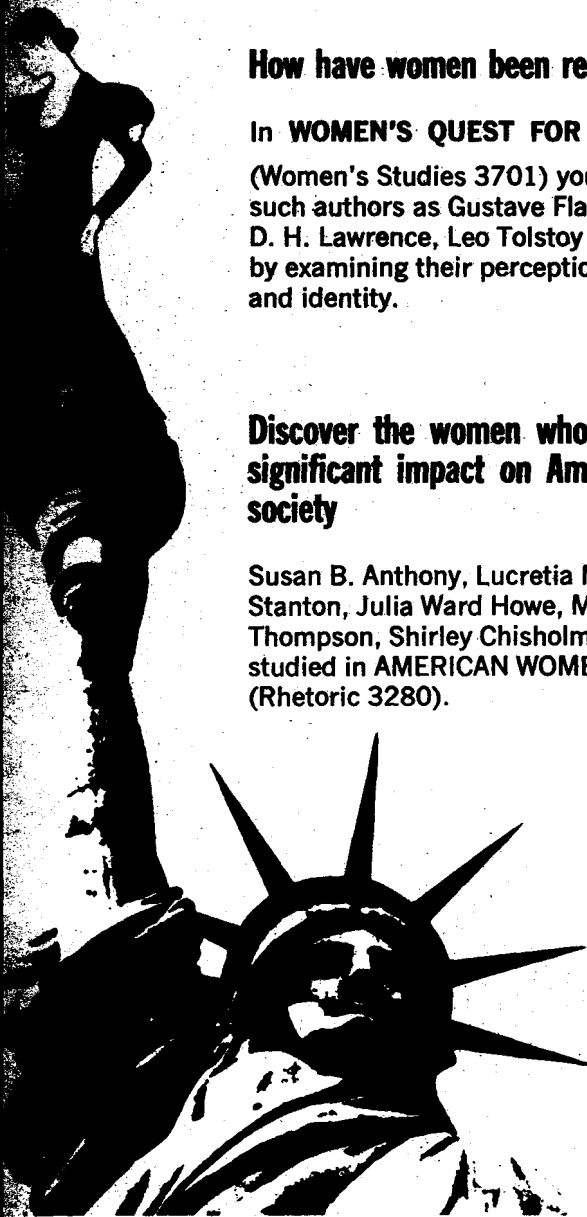
In **WOMEN'S QUEST FOR SELF REALIZATION**

(Women's Studies 3701) you will gain insight into such authors as Gustave Flaubert, Anton Chekhov, D. H. Lawrence, Leo Tolstoy and Catherine Mansfield by examining their perceptions of women's position and identity.

Discover the women who have made a significant impact on American culture and society

Susan B. Anthony, Lucretia Mott, Elizabeth Kady Stanton, Julia Ward Howe, Margaret Sanger, Dorothy Thompson, Shirley Chisholm, to name a few, will be studied in **AMERICAN WOMEN COMMUNICATORS** (Rhetoric 3280).

For other related courses see these departments in course offerings: Women's Studies, History, Family Social Science, American Studies, English, and Humanities.





cinema

"Making films is for me a necessity of nature, a need comparable to hunger or thirst." — Ingmar Bergman

Ever have trouble understanding a Bergman film? Try it again, this time for credit, in **INGMAR BERGMAN** (Scandinavian 5601). Among the films to be shown are: **Sawdust & Tinsel, Smiles of a Summer Night, Wild Strawberries, Persona**. Increase your appreciation of Swedish artistic expressionism that began with Swedish playwright Strindberg.

GERMAN LITERATURE IN TRANSLATION AND THE FILM (German 3604) is back again for those interested in 'classic' German films and related avant-garde literature. Films include **The Trial, The Blue Angel, Aren't We Wonderful, Marat Sade, The Bridge, and The Hunters are the Hunted**. Literature includes **The Sandman** by Hoffman, **Death in Venice** by Mann, **Steppenwolf** by Hesse, **The Metamorphosis** by Kafka and short stories by Böll.

The history of American films will be traced in **LITERATURE: THEATRE-FILM AND DRAMA** (General College 1374). Film critiques will focus on the sociological and altruistic approaches of directors such as Ford, Hitchcock and Minelli.

MODERN FRENCH CINEMA: ITS LITERARY AND CULTURAL IMPACT (French 3604) depicts French cinema as an innovative art form and its affect on French arts and modern culture.

For related courses, see Studio Arts in the **course offerings**.

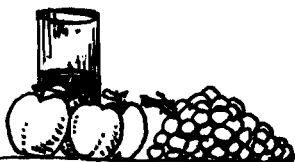
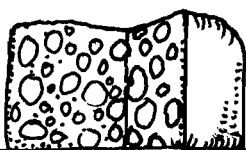
These courses may be taken on a reduced tuition plan (page 32).

You too can make sauerkraut

Learn to ferment it safely, and to can string beans, pickles, and jam. Enroll in HOME PRESERVATION OF FOODS (Food, Science and Nutrition 1215). Learn the proper ways to can, freeze, ferment and dry foods to meet your needs. Also, participants get the chance to pickle a cucumber — at least once.

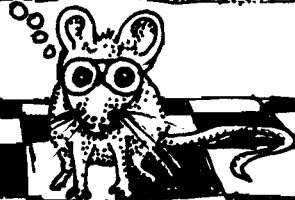
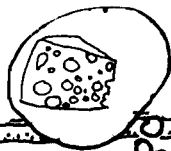
Concerned about a proper diet?

Learn the biological value of carbohydrates, proteins, saturated and non-saturated fats, minerals, and vitamins (natural and synthetic) which help determine proper nutrition. In FAMILY NUTRITION (Food, Science and Nutrition 1603), food habits and beliefs will be explored with a critique of popular weight-reducing diets. Also, evaluations of nutritional labeling will be included to help persons avoid food deficiencies.



Practice how to make cheese, taste cheese (the good, bad and indifferent) and keep it from spoiling. Enroll in UNDERSTANDING CHEESE (Food, Science and Nutrition 1030). This course outlines the nutritional value of cheese and the biochemical events that make it all possible.

For related courses, see Food, Science and Nutrition in course offerings.





MAGIC

&

madness

Want a new view of occult? Then **MAGIC, WITCHCRAFT, AND THE OCCULT IN GREECE AND ROME** (Classics 1019) is the course for you. Comparisons are made between the present socio-economic milieu and that of ancient Greece — where the practices of witchcraft, clairvoyance and demonic possession burgeoned.

During ancient times, 12 models of activity were considered outside the boundaries of normal social behavior. What were they, and do they hold true today? Find the answer in **MADNESS AND DEVIANT BEHAVIOR IN ANCIENT GREECE AND ROME** (Classics 5005).

The Divided Heart

Many of America's immigrants suffered from homesickness for Norway, Sweden and Denmark, but stayed here anyway. In **SCANDINAVIAN IMMIGRANT CULTURE AND ITS BACKGROUND** (Scandinavian 1504) literary works will reveal Scandinavian's reasons for immigration, their journeys here, where they settled and their attempts to maintain a heritage. Readings will be taken from **The Emigrants** by V. Moberg, **Giants in the Earth** by O. Rolvaag, **My Antonia** by W. Cather, and others.

Rated 'G'

German children's literature has transmitted social values for centuries. In **INTRODUCTION TO GERMAN FOLKLORE** (German 3541), you will discover how folklore reflects German attitudes regarding materialism, work, health, and social and religious tradition. Studies will include fairy tales, folk and hiking songs, proverbs, legends, popular music, and dramatizations.

These courses may be taken on a reduced tuition plan (page 32).

For related courses, see these departments in **course offerings**: East Asian Languages, French, German, Middle Eastern Languages, Scandinavian Languages, Slavic and East European Languages, South Asian Studies and Spanish.



"There will be the need of sports for the habits of the soul, even at six years of age." — Plato, 380 B.C.

Intramurals-Extramurals for men and women

Enjoy competitive and non-competitive, organized and informal sports activities as regularly as your time and interests permit.

To participate, Extension students must pay the student services fee (\$4.76 per quarter, \$7 per semester).

Choose an intramural sport to suit you: archery, basketball, bowling, cross country, golf, handball, paddleball, soft ball, swimming, track, volley ball, wrestling, and others.

Extramurals are composed of partially self-supported clubs, funded in part through the Intramural Program. They include aikido, badminton, diving, folk dance, judo, karate, modern dance, sailing, scuba, skating, and others.

For further information about these programs, call 373-4200.

Spruce-up your garden . . .

Learn (with the aid of illustrated lectures) how to grow fruits, vegetables and ornamental plants, in **FUNDAMENTALS OF HORTICULTURE (Horticulture 1001)**.

. . . and your lawn

HOME LANDSCAPE GARDENING AND DESIGN (Horticulture 1010) helps you understand how plants grow, and what they require for growth. Also, discover how to correctly buy trees, shrubs, turf and flowers, and to maintain proper care of the landscape.

PLANT MATERIALS I, II (Horticulture 1021, 1022) is for nurserymen, landscape architects and homeowners — to help them learn: why plants grow better under certain conditions; the relationship between plants; and the best use of perennial and annual flowers for creative landscape design.

These courses may be taken at the St. Paul campus or the Landscape Arboretum, Chaska.

For related courses, see the following departments in **course offerings**: Botany, Landscape Architecture, Horticulture and Plant Pathology.

RELIGION

How did Biblical individuals, families and nations deal with conflicts and crises? Find the parallels between then and now in **THE KING JAMES BIBLE AS LITERATURE** (English 3251, 3252) Compare social concerns as described in the Bible with social concerns described by authors such as Tolstoy and Shakespeare.

How people in a variety of cultures use rituals, symbols and legends to cope with social problems will be the theme of **RELIGION AND CULTURE** (Anthropology 3131). Some broad topics will be explored: initiation and world renewal ceremonies; the structure of myth; and the relation of symbols to other aspects of culture. Cultural settings include New Guinea, Burma, Africa and North America.

PSYCHOLOGY AND RELIGION (Psychology 1911) will provide students the opportunity to examine their thoughts regarding religion. The giants of psychology will be scrutinized for their interpretations of religious practices and beliefs: Fromm, Jung, Freud, James and others.

These courses may be taken on a reduced tuition plan (page 32).

For related courses, see the following departments in course offerings: American Studies, Anthropology, Classics, History, Humanities, Middle Eastern Languages, Philosophy, Sociology and South Asian Languages.

A Victorian Festival

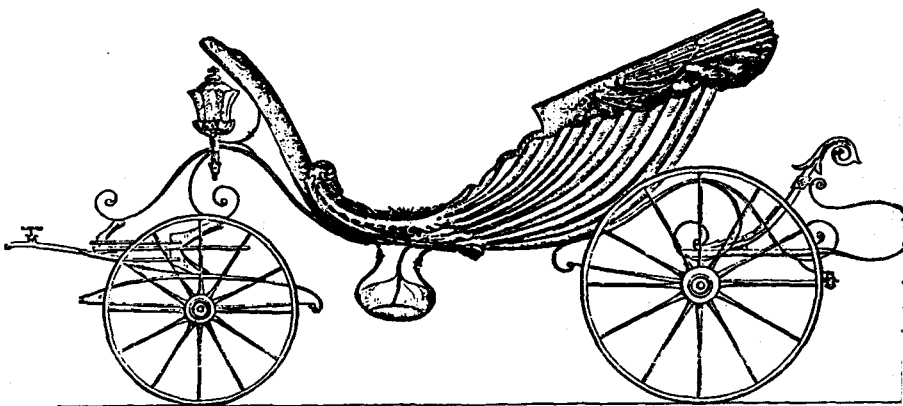
Victorian life and culture will be the subject of a series of activities on campus this fall. Students, faculty and the public are invited to participate in the following events:

THE MIND AND ART OF VICTORIAN ENGLAND (Humanities 3666), will be offered through Extension Classes in conjunction with a free, nine-week lecture series open to the public. Lecture topics will cover religion, the arts, science, literature, political and social thought. The series, presented by outstanding American authorities, will be on Thursdays, at 8 p.m., in 125 Auditorium Classroom Building, Oct. 3 through Dec. 5.

Joseph T. Butler, American editor, *The Connoisseur* magazine, will present a special lecture, "English Decorative Arts of Victoria's Era," on Friday, Oct. 11, at 8 p.m., in 125 Auditorium Classroom Building. Student admission \$1 — General Public \$2.50.

Complementing these activities will be an exhibition of Victorian Royal Academy paintings from the **Forbes Magazine Collection** at the University Gallery, Northrop Auditorium, Sept. 28 through Nov. 2. Enhancing the paintings will be a display of 19th century decorative arts, didactic material, and a film on Victorian life and culture.

Sponsored by the University Gallery, and Continuing Education and Extension, these events are made possible by a grant from the National Endowment for the Humanities.



Minds, Bodies, and Machines

Is the mind, as a subject, outside the scope of human science?

What would be needed to build a machine that uses a natural language as humans do?

Penetrate the behavioristic and materialistic approaches to the minds, in **MINDS, BODIES, AND MACHINES** (Philosophy 5615).

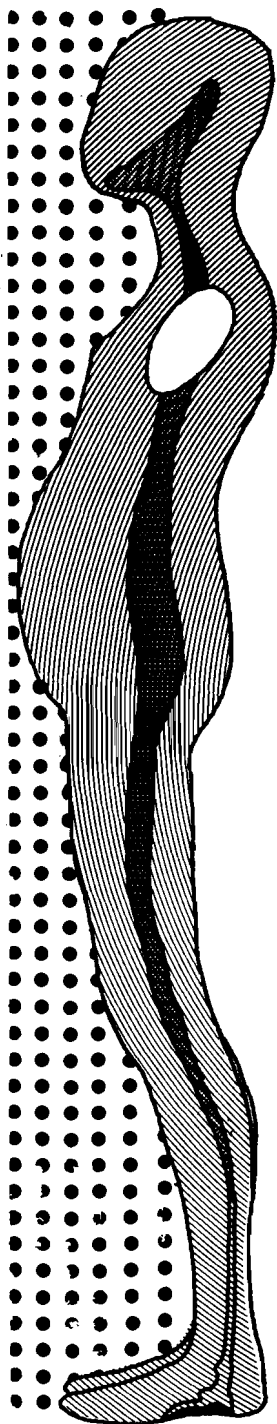
The Meaning of Humanity

Can the essence of Man be explained?

There doesn't seem to be an answer to this intricate question. But through the ages, Socrates, Marx, Freud and others have attempted to solve the World Riddle.

Learn about their theories in **THE MEANING OF HUMANITY** (Humanities 3101).

These courses may be taken on a reduced tuition plan (page 32).



This year Extension Classes presents approximately 40 one-hour lectures open to the public.

University faculty, representing a diversity of fields and interests, will give specially prepared lectures in connection with their regular course meetings. You may choose from the topics which suit your interests. The cost per lecture is \$1. Call 373-5166 and ask for the schedule of topics in the "University Sampler."

INDIVIDUALIZED BASIC GERMAN (German 1110) makes it possible to learn German at a rate you set. Depending on your skill, you can complete up to 15 credits in one quarter.

You determine the learning pace with an instructor, and take Achievement Unit Tests (on lessons covering oral and written comprehension) any time during a term. Each achievement unit, satisfactorily completed, is equal to one credit.

Registration is simple: Determine your course fee during regular registration periods by the number of credits you expect to complete. If you think you will not accomplish the goal by the third week of the term, you may cancel the class and obtain a refund (**cancelation procedures**, page 28). If you receive more credit than you originally expected, additional tuition will be required after you get a grade report for the term (no late fee will be assessed).

American Indian History: A Survey

Traditional forms of Indian decoration contained porcupine quills and not glass beads — learn what is truly American Indian tradition. Register for AMERICAN INDIAN HISTORY: A SURVEY (American Indian Studies, 1101, 1102).

Minority Group Relations

What social and cultural factors have made what impact on American minority groups, such as Mexicans, Japanese, Chinese, Puerto Ricans, American Indians and Blacks?

And what are the power relationships between these groups? The history of ethnic peoples in America, with emphasis on the "Black experience," answers these questions in MINORITY GROUP RELATIONS (Sociology 5951).

Afro-American Literature

Who are Langston Hughes, Claude McKay, Countee Cullen and James Weldon Johnson? They are Black American poets who made impressive contributions to American literature during the Harlem Renaissance in the '20s.

AFRO AMERICAN LITERATURE (Afro-American Studies 3101) brings to light these writers, plus a wealth of folklore, including spirituals, blues and animal tales. Other Black American writers featured are Frederick Douglass (slave narratives), Paul Laurence Dunbar (poet), and Charles W. Chesnutt (novelist and short story writer).

These courses may be taken on a reduced tuition plan (page 32).

These medical issues may concern you

A blood donation from a paid donor may be contaminated with a disease, such as serum hepatitis.

The quality of medical care may depend upon the amount of money a patient has.

Society may be violating citizens rights when confining persons (judged mentally ill) who have never committed a crime.

A person may be declared legally dead while his heart continues to beat.

The moral questions raised by medical problems will be explored in **SELECTED TOPICS IN PHILOSOPHY: MEDICAL ETHICS** (Philosophy 5770).

Does the weather bother you?

Try understanding it!

INTRODUCTION TO METEOROLOGY (Geography 1425) will reveal the factors which underlie the daily and monthly expressions of the atmosphere. Students use them as a basis for analyzing meteorological information and weather maps. Procedures used to make daily forecasts will also be analyzed.

Special Classes:

conveniently located, usually off-campus
offered for credit or noncredit
scheduled flexibly
arranged within four to six weeks

Courses devised specially to meet the needs or interests of

civic groups

businesses

government agencies

professional groups

neighborhood groups

church memberships

or just about any type group you can think of.

To arrange a Special Class at a location of your choice,
call 376-4815 or 373-7561. Also, lectures may be arranged
on topics of your choice.



Travel-study opportunities

UNIVERSITY IN LONDON Continuing Education and Extension will again offer courses (related to English theatre and history) in London, Sept. 24 — Dec. 1) taught by British and University of Minnesota faculty. Students may apply by mail or in person no later than Friday, August 9, at the World Affairs Center, 306 Westbrook Hall. The approximate cost is \$940, which includes 12 credits of tuition, 70 nights lodging (including full English breakfast) and overseas credit fees. Other courses are being planned in London for the Spring and Fall of 1975. Call the World Affairs Center (373-3709) for complete information.

WINTER QUARTER IN MEXICO Learn the art and craft techniques indigenous to Tlaxiaco, Oaxaco, from local craftsmen. Students may obtain 12 credits (eight in studio arts). Cost for tuition, transportation, room and board is about \$550. Apply by October 14 (see Arts, Studio for complete information on registration procedures).

DIRECTED STUDY ABROAD Combine architectural research with local and/or foreign travel by registering for Architecture 5970 through Extension Classes. The course content and number of credits is arranged in consultation with the School of Architecture. For more information call 373-2198.

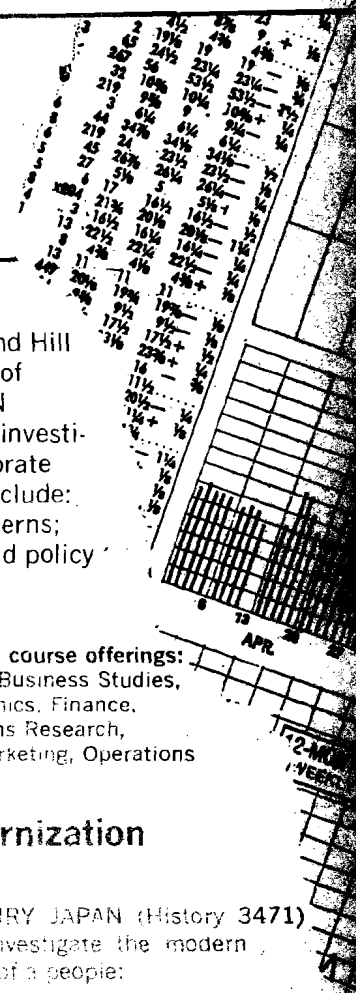
SUMMER IN FINLAND Study the Finnish culture and environment as they relate to family value systems, esthetics and lifestyles (nine credits may be obtained). For more information, see Family Social Science.

AMERICAN BUSINESS HISTORY

Jones! Is the Dow up?

Rockefeller, Carnegie, Ford, Edison, Morgan and Hill are notable figures responsible for the change of business institutions in America. In AMERICAN BUSINESS HISTORY (History 3841), students investigate the roles they played in creating the corporate form in the 20th century. Interrelated topics include: how the corporate form effected economic patterns; government policies regarding monopolies, land policy and patent law; and corporate responsibility — democracy vs. corporate plutocracy.

For related courses, see the following departments in course offerings: Accounting, Business Administration, Business Law, Business Studies, Computer, Information and Control Sciences, Economics, Finance, Industrial Relations, Industrial Engineering, Operations Research, Management, Management Information Systems, Marketing, Operations Analysis and Management, and Salesmanship.



The Modernization of Japan

In 20th CENTURY JAPAN (History 3471) students will investigate the modern transformation of a people:

- Their break with tradition in response to Western expansion in the late 19th century.
- Their drive for economic growth and empire which led them to war with China and the U.S.
- Their reaction to defeat in World War II and to the American occupation.

The impact of these events, and the rapid social change in the individual, the family and the community will be emphasized.

This course may be taken on a reduced tuition plan (page 32). For related courses, see the following departments listed in course offerings: Art History, East Asian Languages, Languages, History and Political Science.



**Too Busy during the week?
Try a Saturday class!**

- Principles of Accounting (Accounting 1024, 1025, 1026)
- *Basic Drawing (Studio Arts 1101)
- *Introduction to Photo Medium (Studio Arts 1701)
- *Water Color (Studio Arts 3100)
- *Principles of Economics (Economics 1001)
- *Lithography (Studio Arts 1520)
- *Intermediate Lithography (Studio Arts 3520)
- *Advanced Lithography (Studio Arts 5520)
- Plant Materials (Horticulture 1021)
- *Fundamentals of Management (Management 3001)
- Algebra, Probability, and Pre-Calculus (Mathematics 1141)
- Introduction to Calculus of one and Several Variables (Mathematics 1142)
- Theory of Numbers (Mathematics 5209)
- *Swimming for Children (Physical Education 0001)
- Application of Psychology To Living (Psychology 1003)
- Introduction to Sociology (Sociology 1001)
- *Beginning Acting: Creative Approach (Theatre 1321)
- Beginning Acting: Technique (Theatre 1326)
- Mime and the Actor (Theatre 1328)
- Stage Fencing and Combat: History and Execution (Theatre 3314)
- Advanced Acting (Theatre 3321)
- Dialects (Theatre 3322)

For complete information, see the classes under their departments in the course offerings section. *Limited class (pages 36-38)

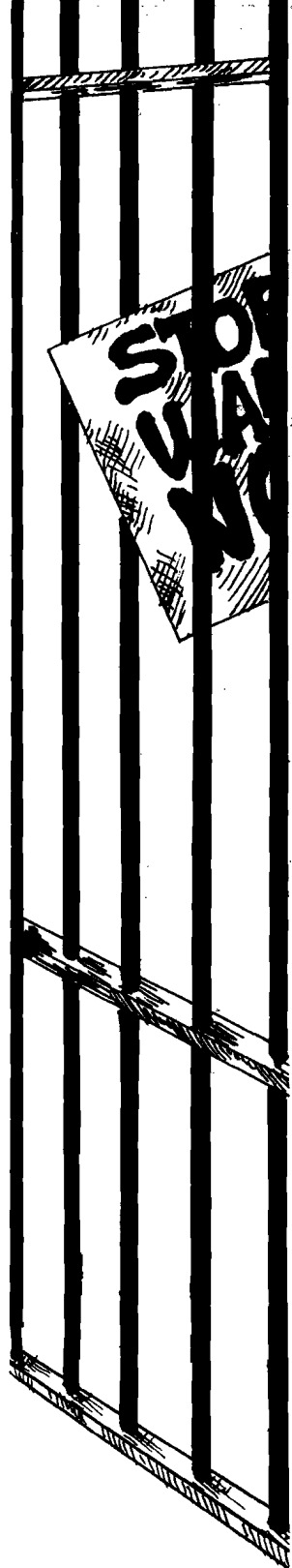
Felons, vagabonds, gypsies and religious non-conformists

Throughout European history, from the Middle Ages to the 1920's, those considered deviant from customary behavior or thought were often condemned to galleys, workhouses, labor services and penitentiaries. In HISTORY OF EUROPEAN PENAL SYSTEMS (History 5289) students will examine how prisons have been a problem for societies across Western Europe. Emphasis will be placed on precedents for "modern" systems of detention and rehabilitation in corrections.

What happened to student power?

University students had more decision-making influence in the Middle Ages and were more organized in the 1930's than the 1960's. Discover why their power has shifted over the centuries in THE STUDENT MOVEMENT IN HISTORICAL PERSPECTIVE (Social Science 3304). The course covers all aspects of governance in a university; the role of students; and 'studenthood' as a concept from the 13th century to the present.

This course may be taken on a reduced tuition plan (page 32).



What is a Mini College?

It is an attempt to create for the part-time student the social and intellectual community which is an ideal part of any college experience. Extension Classes will offer integrated multiple-course programs which will extend over a period of time — generally a year. These programs will be open to a limited number of students (50). Students will be asked to make a commitment to the entire program unit. When more than one course meets in a term, students will be required to register for both courses in the unit.

Who is the Mini College for?

It is a program designed for the student committed to seeking a better understanding of the world he lives in.

It is for the student who wants to probe the relationships between material covered in different courses and to come to grips with these inter-relationships.

It is a program for the student who wants to get to know his fellow students and be able to discuss with them, as well as the professor, what he learns.

It is a program for the degree seeking student as well as the "casual" learner. The course units will be capable of standing alone, but can be used as "building blocks" in a student's progress toward a degree. It is a program in which much will be asked of the student. We can provide the environment and the coordination for such a program but cannot guarantee that all your questions will be answered — that all the inter-relationships will become apparent. This will be a project for you to share with other students and professors.

When will this program begin?

This year Extension Classes is offering a four course unit entitled "American Values in Transition: An Examination of Forces Acting on the Individual in Modern America." The sequence will include the courses listed below. If you have already taken the American Studies courses, you will be able to register for extra credit in these courses. You may register at the 1XXX or 3XXX level.

American Studies 1101 AMERICAN LIFE

American Studies 3111 INTRODUCTION TO AMERICAN CIVILIZATION

Fall Semester, Tuesday 6:20-8:00

History 1310 TOPICS IN AMERICAN HISTORY

Fall Semester, Tuesday 8:15-9:55

American Studies 1102 AMERICAN LIFE

American Studies 3112 INTRODUCTION TO AMERICAN CIVILIZATION

Spring Semester, Tuesday 6:20-8:00

Sociology 1002 AMERICAN COMMUNITY

Spring Semester, Tuesday 8:15-9:55

Students interested in registering for the sequence can obtain additional course material as well as registration material by calling 376-4815.

elementary education

(See also Math 5005-5006, Topics in the Mathematics of Primary Schools)

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 Division of Elementary Education.

For further information about planning individually designed courses or workshops contact:

Coordinator of Continuing Professional Education, Division of Elementary Education, 258 Burton Hall, University of Minnesota, Minneapolis, Minnesota 55455, Telephone: 373-3974.

S-N registration not permitted in Elementary Education unless specifically indicated in course description.

S-N registration not permitted in Elementary Education unless specifically indicated in course description.

***Elem 5103 WORKSHOP: CURRICULUM LABORATORY PRACTICE.** This offering for 3 degree credits, (maximum 6 cr) \$45.

Analysis and construction of units, courses of study and curricula according to needs, interests, level, specialization. **Emphasis this offering:** Working with materials in Kerlan-Hess Special Collections. (Prereq elementary school teaching experience and $\$$. Limited to 15 students. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 T—6:20-8:50, WaLib 109, Stein

engineering

Your attention is called to the Undergraduate Development Certificate Series in Engineering and Science page 90.

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

engineering—engineering graphics

NEW PROGRAM AT THE POST-BACCALAUREATE LEVEL— PROFESSIONAL DEVELOPMENT RECOGNITION PROGRAM IN ENGINEERING AND SCIENCE

The University of Minnesota Institute of Technology faculty has approved the development of a pilot program of Professional Development Recognition which will help plan and document the continuing education programs of individuals in areas of science and technology. Each cycle of Professional Development Recognition will require approximately two years of effort employing a variety of educational formats. Minimum qualifications for entry to the program will be a bachelor's degree or its equivalent.

Upon acceptance, a candidate will establish an individualized program of study with a Professional Development adviser. Further details may be obtained by writing Director, Continuing Education in Engineering and Science, 101 Experimental Engineering, University of Minnesota, Minneapolis, Minnesota 55455; 373-3132.

Please see the following departmental listings for course offerings:

AEROSPACE ENGINEERING AND MECHANICS
CIVIL AND MINERAL ENGINEERING
ENGINEERING ENGLISH (English)
ENGINEERING GRAPHICS
INDUSTRIAL ENGINEERING/OPERATIONS RESEARCH
INSTITUTE OF TECHNOLOGY
MECHANICAL ENGINEERING
METALLURGICAL ENGINEERING

For information on non-credit conferences or workshops in engineering and science, please contact Morris L. Nicholson, Director, Continuing Education in Engineering and Science, 151 Chemical Engineering; telephone 373-3132.

IT 0001 REFRESHER COURSE IN ENGINEERING FUNDAMENTALS. No credit, \$56.

Review of the fundamentals which undergird all major fields of engineering. Mathematics, physics, chemistry and materials science, mechanics thermodynamics, electric circuits, fluid mechanics, engineering economics and legal and professional aspects. Designed particularly for individuals who plan to take part I of the Registration Examinations. (Prereq Bachelor's degree in Engineering, Physics, or Mathematics)

Fall Qtr Sec 1 W—6-8:40, MechE 108.

(See also refresher courses in civil engineering, page 136; electrical engineering, page 159; mechanical engineering, page 261.)

engineering graphics (EG)

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

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

engineering graphics—english

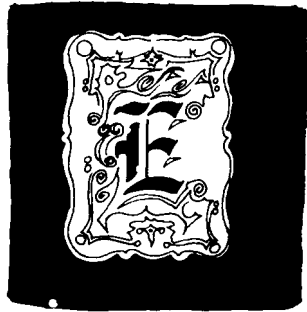
Paul W. Bullen, Assistant Professor of Mechanical Engineering
John N. Clausen, Assistant Professor of Mechanical Engineering
Lewis G. Palmer, Associate Professor of Mechanical Engineering
Richard D. Springer, Associate Professor of Mechanical Engineering

EG 1025 ENGINEERING GRAPHICS. 4 degree credits, \$56

Engineering representation and analysis of systems of projection; the coordinate systems, graphical solution of space problems, intersections and developments. Precision in graphics and techniques of sketching; pictorial projection systems, size description, standard and simplified practices applied to graphic communication. (Prereq Math 1211 or 11211 or ‡)

Spring Sem Sec 1 M—6-8:30, Arch 10

english (Engl)



(See Master of Arts in English, page 70)

Chester Anderson, Professor of English
Kent Bales, Associate Professor of English
Robert Brown, Assistant Professor of English
Michael D. Browne, Assistant Professor of English
Julie Carson, Assistant Professor of English
Thomas S. Clayton, Professor of English
Phillip G. Furia, Assistant Professor of English
Arthur I. Geffen, Assistant Professor of English
David Haley, Associate Professor of English
Michael Hancher, Assistant Professor of English
Chadwick Hansen, Professor of English
Gordon Hirsch, Assistant Professor of English
J. Dennis Hurrell, Professor of English
Onwuchekwa Jemie, Associate Professor of English
Calvin Kendall, Associate Professor of English
Archibald I. Leyasmeyer, Associate Professor of English
John W. Lippert, Lecturer in English

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

english

Andrew MacLeish, Professor of English
Raymond McClure, Assistant Professor of English
John McNally, Associate Professor of English
John Mitchell, Assistant 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., Assistant Professor of English
Martin Roth, Associate Professor of English
James L. Scoggins, Professor of English
Robert Solotaroff, Associate Professor of English
Martin Steinmann, Jr., Professor of English
Ellen Stekert, Professor of English
George T. Wright, Professor of English

composition (Comp) and communication (Comm)

Introductory Composition 1001 and Communication 1001 are being offered without prerequisite during the 1974-75 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 Comp 1001 or Comm 1001 should check with the appropriate department concerning possible exemption.

Comp 0001 PREPARATORY COMPOSITION. No credit, \$42. ★

Intensive drill on grammatical forms, structure, and theme writing. Recommended for those whose primary need is organization and development of themes. (No prereq)

Fall Qtr Sec 1 T—6:20-8:50, MainE 325

Comp 1001-1002 INTRODUCTORY COMPOSITION. 4 degree credits each quarter, \$56 each quarter. ★

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)

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

MINNEAPOLIS CAMPUS

- Fall Qtr 1001** Sec 1 **M**—6:20-9:50, MechE 212
 Sec 2 **T**—6:20-9:50, MechE 212
 Sec 3 **W**—6:20-9:50, MechE 212
 Sec 4 **Th**—6:20-9:50, MechE 114
 Sec 5 **F**—6:20-9:50, MechE 212
1002 Sec 6 **M**—6:20-9:50, MechE 114
 Sec 7 **W**—6:20-9:50, MechE 202
Winter Qtr 1001 Sec 8 **M**—6:20-9:50, MechE 114
 Sec 9 **T**—6:20-9:50, MechE 114
 Sec 10 **W**—6:20-9:50, MechE 212
1002 Sec 11 **T**—6:20-9:50, MechE 212
 Sec 12 **Th**—6:20-9:50, MechE 114
1003 Sec 13 **F**—6:20-9:50, MechE 114
Spring Qtr 1001 Sec 14 **M**—6:20-9:50, MechE 212
 Sec 15 **T**—6:20-9:50, MechE 212
 Sec 16 **Th**—6:20-9:50, MechE 114
1002 Sec 17 **T**—6:20-9:50, MechE 202
 Sec 18 **W**—6:20-9:50, MechE 114

KELLOGG HIGH SCHOOL

- Fall Qtr 1001** Sec 19 **T**—6:20-9:50, Kel HS 229
Winter Qtr 1002 Sec 20 **T**—6:20-9:50, Kel HS 229

MINNETONKA HIGH SCHOOL

- Fall Qtr 1001** Sec 21 **W**—6:40-10:10, Mtka HS 119

RICHFIELD SENIOR HIGH SCHOOL

- Fall Qtr 1001** Sec 22 **W**—6:30-10:00, Rich HS 221
Winter Qtr 1002 Sec 23 **W**—6:30-10:00, Rich HS 221

(See also GC 1429, Writing: Individual Study)

Comp 0002C GRAMMAR REVIEW. 3 certificate credits, \$42. ★

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, MechE 221, O'Connell
Winter Qtr Sec 2 **T**—6:20-8:50, MechE 202, O'Connell
Spring Qtr Sec 3 **T**—6:20-8:50, MechE 221, O'Connell

Comm 1001-1002-1003 COMMUNICATION. 4 degree credits each quarter, \$56 each quarter. ★1001, 1002

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)

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

english

Fall Qtr 1001	Sec 24	M—6:20-9:50, Ph 131
	Sec 25	T—6:30-10:00, Sand JHS 210
1002	Sec 26	W—6:20-9:50, Ph 131
Winter Qtr 1001	Sec 27	T—6:20-9:50, Arch 50
	1002	Sec 28
	Sec 29	T—6:30-10:00, Sand JHS 210
1003	Sec 30	W—6:20-9:50, Ph 131
Spring Qtr 1001	Sec 31	W—6:20-9:50, Ph 170
	1002	Sec 32
1003	Sec 33	M—6:20-9:50, Ph 131

Comp 0003C REVIEW OF BUSINESS ENGLISH. 3 certificate credits, \$42.

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 Sem Sec 1 T—6:20-8:00, MainE 215, Lippert

Comp 0004C BUSINESS CORRESPONDENCE. 3 certificate credits, \$42

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 Sem Sec 1 M—6:20-8:00, MainE 215, Lippert

Spring Sem Sec 2 T—6:20-8:00, MainE 215, Lippert

Comp 1027, 1028 INTERMEDIATE COMPOSITION. 4 degree credits each quarter, \$56 each quarter. ★ 1027.

Offers training in the fundamentals of expository writing, through lectures and the criticism of manuscripts. **1027:** Expository writing—articles, essays, criticism, etc. **1028:** Expository writing using description and narration. (Prereq completion of freshman English requirement or # for 1027 and 1028)

Fall Qtr 1027 Sec 1 M—6:20-9:50, MainE 305

Sec 2 W—6:20-9:50, MainE 305

Winter Qtr 1027 Sec 3 T—6:20-9:50, MainE 305

Spring Qtr 1028 Sec 4 W—6:20-9:50, MainE 305

***Comp 1111 CREATIVE WRITING—POETRY.** 4 degree credits, \$56.

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)

Spring Qtr Sec 1 T—6:20-9:30, Browne (Limit 15 students*)

Comp 1113, 1114, 1115 AN INTRODUCTION TO CREATIVE WRITING. 4 degree credits each quarter, \$56 each quarter. ★ 1113, 1114.

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. (Prereq #)

Fall Qtr 1113 Sec 1 Th—6:20-9:30, MechE 212, Furia

Winter Qtr 1114 Sec 2 Th—6:20-9:30, MechE 212, Carson

Spring Qtr 1115 Sec 3 Th—6:20-9:30, MechE 212, Norman

Engl 0006C BASIC TECHNICAL WRITING I-II. 3 certificate credits each semester, \$42 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)

Fall Sem I Sec 1 T—8:15-9:55, MainE 215, Lippert

Spring Sem II Sec 2 T—8:15-9:55, MainE 215, Lippert

***Engl 3085 TECHNICAL WRITING FOR ENGINEERING.** 3 degree credits, \$42.

Technical and professional writing, including reports and manuals required of engineers, technical men, and those in the business and sales end of the technical industries. Stress is on concise, definite, connected styles; use of numbers, abbreviations and illustrations; organization of material; proper levels of writing for different levels of readers. (Prereq completion of freshman English requirement. Limited to 25 students)

Fall Sem Sec 1 M—8:15-9:55, MainE 215, Lippert

Spring Sem Sec 2 M—8:15-9:55, MainE 215, Lippert

literature

(See also Humanities [General College]; Phil 3911, Philosophy of Modern Literature and Phil 5512, Philosophy of Literary Criticism)

Engl 1012, 1015, 1016, 1017, 1018, 1019 INTRODUCTORY COURSES IN BRITISH AND AMERICAN LITERATURE. 4 degree credits each quarter, \$56 each quarter. (♦\$28 each quarter) ★1016, 1018

Close reading of a few selected texts, with emphasis on critical discussion and writing. **1012:** Literature of the Renaissance; some major figures and themes. **1015:** Victorian literature; some major figures and themes. **1016:** American literature; some major figures and themes. **1017:** Modern literature: poetry. **1018:** Modern literature: prose fiction. **1019:** Modern literature: drama. (Prereq completion of freshman English requirement)

Fall Qtr 1012 Sec 1 M—6:20-9:30, MainE 217, Haley

Fall Qtr 1018 Sec 2 T—6:20-9:30, MainE 217, McNally

Winter Qtr 1015 Sec 3 M—6:20-9:30, MainE 217, Hancher

Winter Qtr 1016 Sec 4 Th—6:20-9:30, MainE 217, Roth

Spring Qtr 1017 Sec 5 M—6:20-9:30, MainE 217, Brown

Spring Qtr 1019 Sec 6 T—6:20-9:30, MainE 229, McNally

Engl 3111, 3112, 3113 SURVEY OF ENGLISH LITERATURE. 4 degree credits each quarter, \$56 each quarter. (♦\$28 each quarter)

An historical survey of the major figures, movements, and trends in English literature. **3111:** From Chaucer to Milton, including such figures as Spenser, Shakespeare, and Donne. **3112:** From Dryden to Johnson, including such figures as Swift and Pope. **3113:** From Blake to Yeats, including such authors as Wordsworth, Coleridge, Keats, Tennyson, and Browning. (Prereq completion of freshman English requirement)

Fall Qtr 3111 Sec 1 Th—6:20-9:30, MainE 217, Rosendahl

Winter Qtr 3112 Sec 2 Th—6:20-9:30, MainE 229, McClure

Spring Qtr 3113 Sec 3 Th—6:20-9:30, MainE 217, Rosendahl

Engl 3241, 3242 SHAKESPEARE. 4 degree credits each quarter, \$56 each quarter. (♦ \$28 each quarter) ★

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 or four other plays. (Prereq completion of freshman English requirement)

Fall Qtr 3241 Sec 1 W—6:20-9:30, MainE 229, Steinmann

Winter Qtr 3242 Sec 2 W—6:20-9:30, MainE 229, Clayton

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

english

- Engl 3251, 3252 THE KING JAMES BIBLE AS LITERATURE.** 4 degree credits each quarter; \$56 each quarter. (♦\$28 each quarter)
3251: The Old Testament and literary tradition. Readings in the historical narratives, prophets, psalms and wisdom literature. **3252:** The Book of Daniel, the Apocrypha, the New Testament as documents in the history of literature. (Prereq completion of freshman English requirement)
Winter Qtr 3251 Sec 1 M—6:20-9:30, MainE 305, O'Brien
Spring Qtr 3252 Sec 2 M—6:20-9:30, MainE 305, O'Brien
- Engl 3455 AMERICAN SHORT STORY.** 4 degree credits, \$56. (♦\$28)
Historical examination of the American short story from the 18th century to the present. (Prereq completion of freshman English requirement)
Fall Qtr Sec 1 W—6:20-9:30, MainE 203, Carson
Winter Qtr Sec 2 W—6:20-9:30, MainE 203, Solotaroff
Spring Qtr Sec 3 Th—6:20-9:30, MainE 203, Solotaroff
- Engl 3851 THE ENGLISH LANGUAGE.** 4 degree credits, \$56. (♦\$28)
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. (Prereq completion of freshman English requirement)
Fall Qtr Sec 1 M—6:20-9:30, MainE 320, MacLeish
Spring Qtr Sec 2 M—6:20-9:30, MainE 320, MacLeish
- Engl 5151 EIGHTEENTH-CENTURY ENGLISH NOVEL.** 4 degree credits, \$60. (♦\$30)
Selected novels by such authors as Defoe, Richardson, Fielding, Smollett, Sterne, and Jane Austen. (Prereq completion of freshman English requirement. Qualified students may register for graduate credit at the University of Minnesota)
Fall Qtr Sec 1 M—6:20-9:30, MainE 54, McClure
- Engl 5153 TWENTIETH-CENTURY ENGLISH NOVEL.** 4 degree credits, \$60. (♦\$30)
Selected novels by such modern authors as Conrad, Ford, Joyce, Woolf, Lawrence, Forster, Cary, and Waugh. (Prereq completion of freshman English requirement. Qualified students may register for graduate credit at the University of Minnesota)
Spring Qtr Sec 1 M—6:20-9:30, MainE 54, Reed
- Engl 5175 DRAMA SINCE ca. 1920.** 4 degree credits, \$60. (♦\$30)
Survey of chief dramatists, English, American, and Continental. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)
Spring Qtr. Sec 1 M—6:20-9:30, MainE 203, Hurrell
- Engl 5221 CHAUCER.** 4 degree credits, \$60. (♦\$30)★
Readings of selections from *The Canterbury Tales*, with an introduction to the grammar and literary forms of 14th-century English. (Prereq completion of freshman English requirement. Qualified students may register for graduate credit at the University of Minnesota)
Spring Qtr Sec 1 W—6:20-9:30, MainE 217, Mitchell
- Engl 5261 MILTON.** 4 degree credits, \$60. (♦\$30)★
Paradise Lost, *Samson Agonistes*, minor poems, *Areopagitica*, and often, although not always, *Paradise Regained*. (Prereq completion of freshman English requirement. Qualified students may register for graduate credit at the University of Minnesota)
Winter Qtr Sec 1 T—6:20-9:30, MainE 229, Haley

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

Engl 5313 ROMANTIC WRITERS. 4 degree credits, \$60. (◆ \$30)

A close examination of one, two, or three writers. Prereq completion of freshman English requirement. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **Th**—6:20-9:30, MainE 229, Scoggins

Engl 5332 VICTORIAN WRITERS. 4 degree credits, \$60. (◆ \$30)

A close examination of one, two or three writers. (Prereq completion of freshman English requirement. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **Th**—6:20-9:30, MainE 203, Hirsch

(See also page 182).

Engl 5363 JAMES JOYCE. 4 degree credits, \$60. (◆ \$30)

(Prereq completion of freshman English requirement. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **M**—6:20-9:30, MainE 4, Anderson

Engl 5411, 5412, 5413 AMERICAN LITERATURE. 4 degree credits each quarter, \$60 each quarter. (◆ \$30 each quarter)

Historical survey of important authors, intellectual currents, movements, conventions, genres, and themes. Lecture course with emphasis on wide reading. **5411:** Beginnings through Hawthorne. **5412:** Thoreau and Melville through James. **5413:** Crane to present. (Prereq completion of freshman English requirement. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr 5411 Sec 1 **T**—6:20-9:30, NH 213, Roth

Winter Qtr 5412 Sec 2 **T**—6:20-9:30, MechE 18, Ross

Spring Qtr 5413 Sec 3 **T**—6:20-9:30, NH 213, Furia

Engl 5431 AMERICAN POETRY. 4 degree credits, \$60. (◆ \$30)

Critical survey of American poetry from Anne Bradstreet to the end of the 19th century; some attention to historical and intellectual backgrounds; emphasis upon major figures. (Prereq completion of freshman English requirement. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **W**—6:20-9:30, MechE 302, Bales

Engl 5451 AMERICAN NOVEL. 4 degree credits, \$60. (◆ \$30)

History of the American novel from its beginning to the end of the 19th century. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **W**—6:20-9:30, MechE 202, Bales

Engl 5543 HAWTHORNE AND MELVILLE. 4 degree credits, \$60. (◆ \$30)

(Prereq completion of freshman English requirement. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **Th**—6:20-9:30, MainE 302, Ross

Engl 5593 BLACK WRITERS OF THE UNITED STATES. 4 degree credits, \$60. (◆ \$30)

Prose, poetry and drama, with emphasis on writers of the 20th-century. (Prereq completion of freshman English requirement. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **W**—6:20-9:30, MainE 229, Jemie

Engl 5610 TWENTIETH-CENTURY WRITERS. 4 degree credits each quarter, \$60 each quarter. (◆ \$30 each quarter)

Emphasis changes each quarter. Contact instructors for descriptions. May be repeated for credit. (Prereq completion of freshman English requirement. Qualified students may register for graduate credit at the University of Minnesota)

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

english

Fall Qtr Sec 1 W—6:20-9:30, MainE 4, Anderson

Winter Qtr Sec 2 W—6:20-9:30, MainE 4, Reed

Engl 5711 CLASSICS OF LITERARY CRITICISM. 4 degree credits, \$60. (♦ \$30)

An intensive study of selected major works in the classic critical tradition with emphasis on Aristotle and Coleridge and attention to such authors as Plato, Horace, Longinus, Sidney, Dryden, Johnson, Hume, and Eliot. (Prereq completion of freshman English requirement. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 W—6:20-9:30, MainE 302, Clayton

Engl 5753 LITERATURE AND THE OTHER ARTS. 4 degree credits, \$60. (♦ \$30)

An informal, highly tentative exploration of possible relationships of literature to drama, music, painting and sculpture, and architecture: how they influence one another and how their aesthetic and social roles are similar and different. Readings in English and American literature and in aesthetic theory; recordings; gallery visits. (Prereq completion of freshman English requirement. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 T—6:20-9:30, MainE 315, Steinmann

Engl 5831 AMERICAN ENGLISH. 4 degree credits, \$60. (♦ \$30)

History of the English language in the United States; significant regional variation. (Prereq 5851 or §. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 T—6:20-9:30, MainE 302

Engl 5851 STRUCTURE OF MODERN ENGLISH. 4 degree credits, \$60.

Survey of modern English grammar dealing with English phonology, syntax, and semantics; variations and change in English. (Prereq completion of freshman English. Qualified students may register for graduate credit at the University of Minnesota.)

Fall Qtr Sec 1 M—6:20-9:30, MainE 4, Mitchell

Engl 5910 WOMAN'S WORLD: MAJOR WOMEN WRITERS.

(Offered through Continuing Education for Women; see page 173.)

Engl 5920 FOLKLORE. 4 degree credits, \$60. (♦ \$30)

Introduction to the different genres of folklore and the history of folklore scholarship. (Prereq §. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 M—6:20-9:30, MainE 305, Stekert

Engl 8210 SEMINAR: MEDIEVAL STUDIES. 4 degree credits, \$64.

A study of the poetic techniques of Chaucer and other late Middle English poets. (Prereq 5221 or §. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 M—Time arr. Kendall

Engl 8310 SEMINAR: ROMANTIC LITERATURE. 4 degree credits, \$64.

(Prereq §. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 Th—6:20-9:30, MainE 4, Scoggins

Engl 8690 SEMINAR: STUDIES IN DRAMA: DRAMATIC THEORY. 4 degree credits, \$Th 8157. \$64.

History and principles of dramatic theory since the 19th century, studied in relationship to issues and problems in the aesthetics of drama. (Prereq §. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 W—6:20-9:30, MainE 54, Hurrell

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

extension classes—family social science

extension classes (ec)

John S. Malmberg, Assistant Professor
Carol L. Olson, Instructor

EC 0001 MONEY MANAGEMENT. No credit, \$14 plus \$7 special fee. **Total \$21.** (♦\$7 for second member of household. Does not include materials)

In a stimulating five-session simulation, participants acquire the behaviors and abilities to use credit wisely, discriminate between needs and wants in spending, react to financial goals, develop contingency savings funds, and generally move toward greater economic stability. Their skills and abilities are not merely classroom exercises, but real experiences which become part and parcel "at once" of the participant's life style. (No prereq)

Sp Term Sec 1 **T**—6:30-8:30, Oct. 8, 15, 22, 29; Dec. 3; Arch 55, Olson
Sec 2 **Th**—6:30-8:30, Oct. 10, 17, 24, 31; Dec. 5; Arch 55, Malmberg
Sec 3 **T**—6:30-8:30, Jan. 7, 14, 21, 28; Mar. 4; Arch 55, Olson
Sec 4 **Th**—6:30-8:30, Jan. 9, 16, 23, 30; Mar. 6; Arch 55, Malmberg
Sec 5 **T**—6:30-8:30, Apr. 8, 15, 22, 29; June 3; Arch 55, Olson
Sec 6 **Th**—6:30-8:30, Apr. 3, 10, 17, 24; June 5; Arch 55, Malmberg

family social science

(See also College of Home Economics, page 227)

John Engel, Lecturer in Family Social Science
Gerald Carlson, Instructor in Family Social Science
Robert Herron, Instructor in Family Social Science
Richard Hey, Professor of Family Social Science
Ruth Jewson, Instructor in Family Social Science
Gerhard Neubeck, Professor of Family Social Science
Elizabeth Peterson, Associate Professor of Family Social Science
Robert Phillips, Instructor in Family Social Science
Martha Russell, Instructor in Family Social Science
Gail Thoen, Instructor in Family Social Science
Jody Wetzal, Instructor in Family Social Science

FSoS 1001 DYNAMICS OF DATING, COURTSHIP, AND MARRIAGE. 3 degree credits, \$3001. \$42 plus \$1 special fee. **Total \$43.★**

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 **M**—6:20-8:50, Jones 2, Herron
Winter Qtr Sec 2 **M**—6:20-8:50, BlegH 235, Engel
Spring Qtr Sec 3 **M**—6-8:30, Jones 2, Carlson

FSoS 1002 DYNAMICS OF MARRIAGE AND PARENTHOOD. 3 degree credits, \$1001. \$42 plus \$1 special fee. **Total \$43.**

This course is designed to help individuals and couples achieve understanding of self and others, happiness in marriage, and success as parents. It focuses

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

family social science

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)

Fall Qtr Sec 1 **M**—7-9:30, Kel HS 233, Phillips

Winter Qtr Sec 2 **TV course** (see below)

Spring Qtr Sec 3 **Th**—6:20-8:50, BlegH 335, Russell

TV

FSoS 1002 DYNAMICS OF MARRIAGE AND PARENTHOOD (LIVING MARRIED)

Designed to help individuals achieve understanding of self and others, happiness in marriage and success as parents. Study of issues as self-analysis, developmental tasks, team decision-making and problem solving, family philosophy, religion, values, child training and discipline, sex education, communication, income management, etc., from the perspective of behavioral and social sciences. **Part of this course will be viewing the LIVING MARRIED television programs.**

●CREDIT REGISTRATION

2 degree credits, \$24 plus \$4 special fee (credit study guide). **Total \$28** (text extra). In addition to viewing the television broadcasts, registrants will be expected to read text (information not available at time of Bulletin printing) and assigned readings, complete a project, assigned papers and a take-home final examination. (No prereq)

●STUDY GUIDE ONLY

For home viewers who do not wish to register for credit but want to follow the television lectures, a non-credit study guide may be purchased from Extension Classes for \$2.

Winter Qtr Sec 2 **T**—7:30-8:00, KTCA-TV, Channel 2, St. Paul-Minneapolis

T—7:30-8:00, WDSE-TV, Channel 8, Duluth-Superior

T—7:30-8:00, KWCM-TV, Channel 10, Appleton, Minn.

T—7:30-8:00, KFME-TV, Channel 13, Fargo-Moorhead

FSoS 1025 PARENTHOOD. 2 or 3 degree credits, \$28 or \$42.

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)

Fall Qtr Sec 1 **M**—1-2:45, Alexander Ramsey HS 238, 1261 Hwy 36, St. Paul, Peterson

Winter Qtr Sec 2 **M**—6-7:45, NH 209, Thoen

Spring Qtr Sec 3 **M**—7:30-9:15, Aquila School 2, 8500 W. 31 St., St. Louis Park, Peterson

FSoS 3015 LIFE STYLES OF EDUCATED AMERICAN WOMEN. 4 degree credits, \$56

The roles and statuses of American women and how they compare and reciprocate with those of men. The kind of education a woman gets; what influences it; how she uses it throughout her life. Possibilities and needs for change in terms of future objectives. (Prereq \$)

Winter Qtr Sec 1 **W**—6:30-9:00, NH 122, Wetzel

(See other women's courses, page 174)

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

N
E
W

***FSoS 5001 HUMAN SEXUAL BEHAVIOR.** 4 degree credits, \$60.

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)

Fall Qtr Sec 1 **W**—6:20-8:50, BlegH 435, Engel

Spring Qtr Sec 2 **W**—6:20-8:50, BlegH 250, Engel

FSoS 5200 FAMILY RELATIONSHIP. 5 degree credits, \$Soc 5501. \$75.

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)

Winter Qtr Sec 1 **W**—6:20-8:50, McNH 103, StP Campus, Hey

The Family and its Environment in Finland—Summer 1975

June 16-August 16, 1975

The Family in Finland. Finnish culture and environment as related to family value systems, esthetics and life styles. Nine weeks in Finland with excursions to Lapland and Sweden, Denmark and Norway. Field trips in and near Helsinki will include centers for day care and youth recreation, welfare agencies, furniture and fabric design studios, glassware and ceramic workrooms, and Tapiola, the new city. Plans for overland travel to Leningrad are being explored for inclusion.

9 credits

Family Social Science 5230 Independent Study (3 credits). Topic to be planned with instructor.

Family Social Science 5240 Special Topics (6 credits). The Family in Finland.

Instructor: Richard N. Hey

Finnish history, government, institutions and economy will be the content of background information. Family studies will include sex roles, life styles, child rearing practices, housing, and family support systems. A short course in Finnish language will be available without cost to participants. All lectures will be conducted in English by faculty of the University of Helsinki. Housing and meals will be in student owned dormitories.

Registration must be completed by March 1, 1975. Detailed information may be obtained by writing to Professor Richard Hey, 204 North Hall, University of Minnesota, St. Paul, Minnesota 55108.

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).

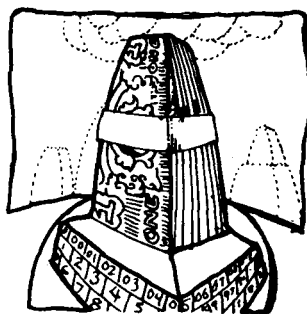
For information on off-campus credit courses in Home Economics areas, please call or write Dr. Roxana Ford, Associate Dean, College of Home Economics, University of Minnesota, St. Paul, Minnesota 55101 (373-0935).

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

finance

finance (BFin)



Your attention is called to the Credit and Financial Management Certificate program, page 84.

E. Norman Eck, North Central Credit & Finance Management Assoc.

George A. Mairs, III, Vice President, Treasurer, Director, Mairs & Power, Inc.

John Schreiner, Associate Professor of Finance

Roger D. Stover, Assistant Professor of Finance

BFin 0001C INTRODUCTION TO INVESTMENTS. 3 certificate credits, \$3000. \$42.

A fundamental course for adult investors who wish a general background of information on the investment field. Classroom instruction supplemented by special lectures by men of experience in investment banking, commercial banking, and other related fields. 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)

Fall Sem Sec 1 **W**—6:20-8:00, NH 209, Mairs

BFin 0002C CREDIT AND FINANCIAL MANAGEMENT PROBLEMS. 3 certificate credits, \$42.

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 3087 or §)

Winter Qtr Sec 1 **W**—6:20-8:50, AndH 210, Eck

***BFin 3000 FINANCE FUNDAMENTALS.** 4 degree credits, \$8000. \$56.

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 1026 or 1051. Limited to 45 students)

Fall Qtr Sec 1 **T**—6:20-8:50, BlegH 205

Sec 2 **W**—7-9:30, Kel HS 235 (Limit 35 students*)

Sec 3 **Th**—6:20-8:50, BlegH 225

Winter Qtr Sec 4 **T**—6:20-8:50, BlegH 205

Sec 5 **Th**—6:20-8:50, BlegH 225

Spring Qtr Sec 6 **M**—6:20-8:50, BlegH 205

Sec 7 **W**—6:20-8:50, BlegH 205

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

finance—food science and nutrition

BFin 3100 FINANCIAL MANAGEMENT. 4 degree credits, \$8100. \$56.

A broad case-oriented course building on concepts in BFin 3000. The viewpoint of a corporation's principal financial officer is generally used. Case discussions, augmented by lectures and readings, enable students to apply financial principles in actual business situations. Students gain experience in problem definition, specification of alternatives, analysis and decisions. Effective verbal and written communication is stressed. (Prereq 3000)

Winter Qtr Sec 1 **W**—5:30-8:00, RarigC 610, Stover

***BFin 3300 INVESTMENT MANAGEMENT.** 4 degree credits, \$0001C. \$56.

Provides students with a comprehensive introduction to investment decision-making from the viewpoints of both individual and institutional investors. Principal focus is on risk-return relationships of various marketable securities. Presents analytical techniques of security selection and portfolio management in the context of the nation's changing securities markets. (Prereq 3000. Limited to 35 students)

Fall Qtr Sec 1 **W**—5:30-8:00, BlegH 330

Winter Qtr Sec 2 **T**—5:30-8:00, BlegH 330

Spring Qtr Sec 3 **Th**—5:30-8:00, BlegH 330

finnish

(See Scandinavian Languages)

food science and nutrition (FScN)

Paul B. Addis, Associate Professor of Meat Science

C. Eugene Allen, Professor of Meat Science

Eugenia P. Davis, Assistant Professor of Food Chemistry

Joan Gordon, Professor of Food Chemistry

P.V.J. Hegarty, Associate Professor of Nutrition

Julie M. Jones, Instructor in Food Science and Nutrition

Larry L. McKay, Associate Professor of Food Microbiology

Howard A. Morris, Professor of Dairy and Food Technology

Gary A. Reineccius, Assistant Professor of Food Chemistry

O.P. Snyder, Associate Professor of Food Service Management

Sita R. Tatini, Associate Professor of Food Microbiology

Elmer L. Thomas, Professor of Dairy and Food Technology

Dorothy G. Verstraete, Assistant Professor of Nutrition

Isabel D. Wolf, Instructor in Food Science and Nutrition

Edmund A. Zottola, Professor of Food Microbiology

***FScN 1030 UNDERSTANDING CHEESE.** 2 degree credits, \$28 plus \$3 course fee. **Total \$31.**

An understanding and appreciation of the conversion of milk into cheese; cheese curing; optimum characteristics of many varieties of natural cheeses; fondue, process and club cheeses; nutritional value and care of cheese in the home. (No prereq. Limited to 30 students)

Winter Qtr Sec 1 **W**—6:30-8:00, MSciL 125, Morris

(For further information on FScN 1030, see page 177)

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

food science and nutrition

***FScN 1215 HOME PRESERVATION OF FOODS.** 2 degree credits, \$28 plus \$3 course fee. **Total \$31.**

Description and demonstration of safe methods of home food preservation. Students will be involved in laboratory preparations of various products. Food preservation methods covered will include: canning, freezing, fermenting, salting, drying, and others as needed. (No prereq. Limited to 30 students)

Spring Qtr Sec 1 **M**—6:30-8:00, FScN 15, Zottola, Wolf

FScN 1500 MEAT SCIENCE. 4 degree credits, \$56 plus \$2 course fee. **Total \$58.**

The role and interaction of muscle structure, function and metabolism in determining the color, tenderness, flavor, juiciness, and nutritional properties of meat. The relationship of these variables to meat selection, preparation, and manufacturing considerations will be emphasized. (Prereq Biol 1011 or #)

Spring Qtr Sec 1 **W**—6:30-9:00, MSciL 125, Allen
(Lab hours arr.)

FScN 1603 FAMILY NUTRITION. 2 degree credits, \$28. (♦ \$14)

Basic concepts in nutrition, emphasizing interrelationships between nutrients and human requirements for specific nutrients. Discussion on current controversial nutrition topics. (No prereq)

Fall Qtr Sec 1 **M**—6:30-8:00, MSciL 125, Hegarty

FScN 3110 FOOD CHEMISTRY. 3 degree credits—lecture only—\$42. 5 degree credits, \$70 plus \$10 course fee—lecture and lab—**Total \$80.**

Chemical properties of foods and food constituents as influenced by processing and storage. (Prereq BioC 1302)

Fall Qtr Sec 1 **Lect W**—6:30-9:00, FScN 15, Reineccius (\$42)
Sec 2 **Lect and Lab WTh**—6:30-9:00, FScN 15, Reineccius (\$80)

FScN 5120 FOOD MICROBIOLOGY. 3 degree credits—lecture only—\$45. 5 degree credits, \$75 plus \$10 course fee—lecture and lab—**Total \$85.**

Relationship of environment to occurrence, growth, and survival of microorganisms in foods; evaluation of microbiological quality of dairy and food products; characteristics and activities of bacteria, yeasts, and molds related to food spoilage; utilization of microorganisms in manufacture of dairy and food products; recognition and control of food-borne pathogens and food poisoning. (Prereq MicB 3103. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **Lect T**—6:30-9:00, FScN 15, McKay, Tatini (\$45)
Sec 2 **Lect and Lab TW**—6:30-9:00, FScN 15, 211, McKay, Tatini (\$85)

FScN 5122 SANITATION AND PROCESS MICROBIOLOGY. 3 degree credits—lecture only—\$42. 4 degree credits, \$60 plus \$10 course fee—lecture and lab—**Total \$70.**

Factors that influence the control and destruction of microorganisms; chemical, physical, and microbiological principles in cleaning and sanitizing dairy and food processing equipment; inactivation of microorganisms and thermal process evaluation; microbiological fermentations and preservation methods; development of sanitation programs, microbiological standards for dairy and food products. (Prereq 5120. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **Lect W**—6:30-9:00, FScN 15, McKay, Tatini (\$45)
Sec 2 **Lect and lab TW**—6:30-9:00, FScN 15, McKay, Tatini (\$70)

FScN 5360 SENSORY EVALUATION OF FOOD QUALITY. 3 degree credits, \$45.

Fundamentals of flavor perception, sensory methods used in measuring quality of food products. (Prereq FScN 3110, Stat 3081 or 5021 or FScN 5350. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **Th**—6:30-9:00, FScN 15, Gordon, Thomas

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

food science and nutrition

FScN 5403 EXPERIMENTAL STUDY OF FOODS. 5 degree credits, \$75 plus \$5 course fee. Total \$80.

Individual laboratory experimentation and comprehensive literature search on a problem in foods. Statistics and computers as a research tool. Data analysis and interpretation for a scientific paper. (Prereq 1212, 3110, Chem 3302 or BioC 1301. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 T—6:30-9:30, MSciL 125, Davis (additional lab hours arr.)

FScN 5404 CURRENT ISSUES IN FOOD AND NUTRITION. 3 degree credits, \$45.

Evaluation of popular and scientific literature as it deals with nutrition, food additives, food safety, food fads, health foods, environmental contamination, the consumer movement, naturally occurring food toxicants, processed foods, synthetic foods, organically grown foods. (Prereq 15 credits in FScN or \$. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 T—6:30-9:00, FScN 15, Jones

FScN 5482 ADVANCED TOPICS IN SENSORY EVALUATION. 2-4 degree credits, \$30-\$60.

Review of current literature pertinent to specific topics under active investigation. (Prereq 5360. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 Th—6:30-9:00, FScN 15, Gordon, Thomas

FScN 5512 MEAT AND PROTEIN TECHNOLOGY. 4 degree credits, \$70 plus \$5 course fee. Total \$75.

Meat proteins: effects of pH, salt and temperature on hydration and emulsification; methods of fractionation. Meat preservation: effects of heat, freezing, curing and problems of product stability during storage. Sausage manufacture: chemistry, technology, least-cost analysis (graphical and computer methods), and chemical methods of quality control (rapid and classical methods of proximate analysis). (Prereq BioC 1302, or \$. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 T—6:30-9:00, MSciL 125, Addis
(Lab hours arr.)

FScN 5664 FIELD EXPERIENCE IN CLINICAL NUTRITION. 3 degree credits, \$45.

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

FScN 5740 DESIGN AND LAYOUT OF FOOD SERVICES. 4 degree credits, \$60.

Problems related to the design and layout of new and remodeled food services. (Prereq 1272, 3730, 3740 (FSoS 1401 recommended) or \$. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 W—6:30-9:30, DinC 154, Snyder

FScN 5750 SELECTED ASPECTS OF FOOD SERVICE AND HOSPITALITY BUSINESS MANAGEMENT. 3 degree credits, \$45.

Management techniques applied to a food service or hospitality business. Methods of analysis and control. (Prereq senior, 3 cr elementary statistics, 6 cr economics, or \$. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 T—6:30-9:00, DinC 154, Snyder

Other credit courses, see College of Home Economics, page 227.

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

forest products—forest resource development

forest products (ForP)

R. W. Erickson, Associate Professor of Forest Products

R. O. Gertjensen, Associate Professor of Forest Products

ForP 5405 PAPER IN TODAY'S WORLD. 3 degree credits, \$45. (♦ \$22.50)

Intended primarily for junior or senior high 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 Wood Science Laboratory is completely equipped with pulp and paper equipment including a pilot plant paper machine. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 T—6-9:00, FP 116, StP Campus, Erickson, Gertjensen

NEW

forest resource development (FRD)



(See also Education)

Roger T. Johnson, Associate Professor of Elementary Education

William R. Miles, Professor of Forest Resources Development

*FRD 5402 INTERPRETATION AND MANAGEMENT OF FOREST ENVIRONMENTS. 3 degree credits, \$45.

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—7:00-9:30, Rich HS 249-250

(FRD 5403 also offered Winter Quarter in Mankato area. Contact Rochester Extension Center for registration information)

*FRD 5403 FUNDAMENTALS OF NATURAL RESOURCE EDUCATION. 3 degree credits, \$45 plus \$5 course fee. Total \$50.

Intended for elementary teachers. Study of soil, water, forest and wildlife resources of Minnesota and the biological principles and ecological implications

NEW

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

forest resource development—french

of management. Environmental issues developed through interactions of natural resource manipulation will be discussed; outdoor teaching skills in environmental education will be experienced in Metropolitan Nature Centers. (No prereq. Limited to 36 students. Qualified students may register for graduate credit at the University of Minnesota)

Sp Term Sec 1 **Fri., Oct. 11, 5-9:30,**
Sat., Oct. 12, 8:30 a.m.-3:30,
Sun., Oct. 13, 9:30 a.m.-3:30,
Mon., Nov. 18, 4-7:00

Wood Lake Nature Center, Richfield (66th and Lakeshore Drive) Johnson, Miles

Sp Term Sec 2 **Fri., Apr. 11, 5-9:30,**
Sat., Apr. 12, 8:30 a.m.-3:30,
Sun., Apr. 13, 9:30 a.m.-3:30,
Mon., May 19, 4-7:00,

Wood Lake Nature Center, Richfield (66th and Lakeshore Drive) Johnson, Miles

french (Fren)

F.R.P. Akehurst, Associate Professor of French
George Bauer, Associate Professor of French
Tom Conley, Assistant Professor of French
Henry Kalb, Assistant Professor of French
Thomas O'Donnell, Assistant Professor of French
Peter Robinson, Associate 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.

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.-8 p.m., Monday-Thursday; 8 a.m.-6 p.m., Friday; 9 a.m.-3 p.m., Saturday; closed Sunday.

The following non-language classes may be applied toward the CLA foreign language requirement, Route II (see page 61): ArTH 3303; Fren 3603, 3604; Hist 5211, 5212.

Fren 1101 BEGINNING FRENCH. 5 degree credits, \$70 plus \$3 course fee. **Total \$73.**
★ See note above. (No prereq)

Fall Qtr Sec 1 MTh—6:20-8:25, FolH 201

Fren 1102 BEGINNING FRENCH. 5 degree credits, \$70 plus \$3 course fee. **Total \$73.**
★ See note above. (Prereq 1101 or #)

Winter Qtr Sec 1 MTh—6:20-8:25, FolH 110

Fren 1103 BEGINNING FRENCH. 5 degree credits, \$70 plus \$3 course fee. **Total \$73.**
See note above. (Prereq 1102 or #)

Spring Qtr Sec 1 MTh—6:20-8:25, FolH 107

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

french

Fren 1104 INTERMEDIATE FRENCH. 5 degree credits, \$70

Consolidation of basic structure and development of oral fluency through readings and discussion. (Prereq 1103 or §)

Fall Qtr Sec 1 TTh—6:20-8:25, FolH 203

Fren 1105 INTERMEDIATE FRENCH. 5 degree credits, \$70.

Readings in contemporary culture. Development of vocabulary and improvement of ability to read, write and speak the language. (Prereq 1104 or §)

Winter Qtr Sec 1 TTh—6:20-8:25, FolH 107

***Fren 3015 FRENCH CONVERSATION AND COMPOSITION.** 5 degree credits, \$70 plus \$10 special fee. **Total \$80.**

Combines traditional conversational and composition courses. Othoepic in approach, leading to an acceptable command of French both in pronunciation and grammar. Includes pastiche-work, free composition, and translation from and into French. (Prereq 1105. Limited to 15 students)

Spring Qtr Sec 1 TTh—6:20-8:25, FolH 108

Fren 3603 20TH CENTURY FRENCH THEATRE IN TRANSLATION. 5 degree credits, \$70. (♦ \$35)

Critical analysis of significant plays of major 20th-Century French dramatists: Apollinaire, Artaud, Cocteau, Giraudoux, Claudel, Anouilh, Sartre, Camus, Beckett, Genet, Ionesco, and others. Taught in English. Requires no knowledge of French. (No prereq. May be applied toward the CLA foreign language requirement. Route II [see page 61]; does not count toward French major).

Fall Qtr Sec 1 MW—6:20-8:50, FolH 104, O'Donnell

Fren 3604 MODERN FRENCH CINEMA: ITS LITERARY AND CULTURAL IMPACT. 5 degree credits, \$70 plus \$5 course fee. **Total \$75.** (♦ \$35 plus \$5 course fee. Total \$40)

French cinema as an innovative art form; its effect on French arts and modern culture; use of a different aesthetic vocabulary closely linked with French literary creation, 1920 to 1970. (Knowledge of French helpful but not necessary; taught in English; does not count towards French major). (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 61])

Spring Qtr Sec 1 MW—6:20-8:50, MechE 4, Conley

french for graduate students

The French language requirements for a graduate degree can be satisfied by successfully passing an examination given at the end of a one-quarter course, 0001, specifically designed for students who desire only a reading knowledge of the language.

Fren 0001 FRENCH FOR GRADUATE STUDENTS. No credit, \$42. ★

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)

Fall Qtr Sec 1 M—6:20-8:50, FolH 202

Winter Qtr Sec 2 M—6:20-8:50, FolH 201

Spring Qtr Sec 3 M—6:20-8:50, FolH 201

Fren 0001 is usually offered as a Summer Extension Class.

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

general college (GC)

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 56). New baccalaureate degree programs are explained in General College Extended Programs, page 57. See also General College Occupational Programs, available all or in part through Extension, which may be applied toward the General College degree program, page 58.

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 a natural world; of man's behavior and social organization; of man's intellectual achievements in the arts, literature, and philosophy; of the means man has found to communicate with his fellow men; and of the ways he has attempted to synthesize and organize his knowledge and experience.

Please see the following departmental listings for all General College course offerings:

BUSINESS STUDIES (page 129)

The Law in Society, GC 1235
 Introduction to Modern Business, GC 1511
 Principles of Small Business Operations, GC 1513
 Practical Law, GC 1534
 Introduction to Data Processing, GC 1535
 Legal Studies: Business Organization, GC 3581
 Legal Studies: Real Estate, GC 3582
 Legal Studies: Estate Planning and Administration, GC 3583
 Legal Studies: Litigation and Trial Practice, GC 3584
 Legal Studies: Income Taxation, GC 3585
 Legal Studies: Legal Research, GC 3586
 Marketing: Retailing and Sales, GC 1551
 Marketing: Sales Promotion, GC 1552
 Marketing: Principles of Management, GC 1553
 Marketing: Supervised Work Experience, GC 1557

COMMUNICATION SKILLS (page 140)

Vocabulary Building, GC 1401
 Fundamentals of Usage and Style, GC 1405
 Communication Skills: Individual Study, GC 1409
 Integrated Communication I, GC 1413-1414
 Integrated Communication II, GC 1415-1416
 Writing: Individual Study, GC 1429
 Creativity: Creative Problem Solving, GC 1471

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

general college—geography

HUMANITIES (page 231)

General Arts, GC 1311
Man's Religious Beliefs, GC 1357
Literature: Theatre, Film and Drama, GC 1374
Minnesota Arts and Letters, GC 3846

NATURAL SCIENCE (page 273)

Man and His Environment, GC 1112
Utilization of Natural Resources, GC 1113
Human Anatomy and Physiology, GC 1132
Fundamental College Mathematics Program, GC 1431
Mathematics: Intermediate Algebra, GC 1445
Minnesota Resources, GC 3841

SOCIAL STUDIES (page 307)

Man in Society: An Introduction to Social Science, GC 1211
Man in Society: Urban Problems, GC 1212
Minnesota History, GC 1221
Practical Politics, GC 1222
Counseling and Work Regarding Community Resources, GC 3621
Human Services Seminar: Individual Group Skills Development, GC 3622-3623

geography (Geog)

Russell B. Adams, Associate Professor of Geography
Anthony R. deSouza, Assistant Professor in Geography
John Fraser Hart, Professor of Geography
Timothy Kelly, Lecturer in Geography
Robert Ostergren, Instructor in Geography
John G. Rice, Associate Professor of Geography

Geog 1301 HUMAN GEOGRAPHY. 5 degree credits, \$70. (♦ \$35)

Geography of population and principal ways of life; capacity of the earth for future population. (No prereq)

Fall Sem Sec 1 T—6-8:45, BlegH 215, Ostergren

Spring Sem Sec 2 T—6-8:45, BlegH 215, Ostergren

Geog 1401 PHYSICAL GEOGRAPHY. 5 degree credits, \$70. (♦ \$35)

Major features of distribution patterns of climate, relief, vegetation and soils; regional differences in problems of physical development. (No prereq)

Fall Qtr Sec 1 W—6-9:20, BlegH 250, Kelly

Geog 1425 INTRODUCTION TO METEOROLOGY. 4 degree credits, \$56. (♦ \$28 lecture only)

Nature of the atmosphere and its behavior. Topics include atmospheric composition, structure, stability and motion; precipitation processes, air masses, fronts, cyclones and anticyclones; general weather patterns; meteorological instruments and observation; plotting and analysis of maps; forecasting. (Prereq high school algebra and physics or §)

Winter Qtr Sec 1 **Lect** T—6:30-9:00, BlegH 415, Kelly

Sec 1 **Lab** Th—6:30-8:10, BlegH 420, Kelly

**N
E
W**

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

geography—geology and geophysics

Geog 3101 GEOGRAPHY OF THE UNITED STATES AND CANADA. 4 degree credits, \$56. (♦ \$28) ★

The manner in which the aspirations and abilities of different groups of people have interacted with the complexities of the natural environment in producing the regional differentiation of the United States and Canada. (No prereq)

Winter Qtr Sec 1 **M**—6-8:50, BlegH 435, Hart

Geog 3111 GEOGRAPHY OF MINNESOTA. 4 degree credits, \$56. (♦ \$28) ★

Physical resources, population, and commercial production. (No prereq)

Spring Qtr Sec 1 **M**—6-8:45, BlegH 450, Rice

Geog 3181 SOVIET UNION. 4 degree credits, \$56. (♦ \$28)

Systematic appraisal by regions of physical resources, population, and economic geography; problems and planning in the U.S.S.R. compared with the United States. (No prereq)

Winter Qtr Sec 1 **W**—6-8:50, BlegH 425, Adams, Rice

Geog 3331 ECONOMIC GEOGRAPHY I: INTRODUCTORY. 5 degree credits, \$70 (♦ \$35)

Analysis of world patterns of economic activity; appraisal of resources, production, circulation, and consumption; principles and potential of economic development. (No prereq)

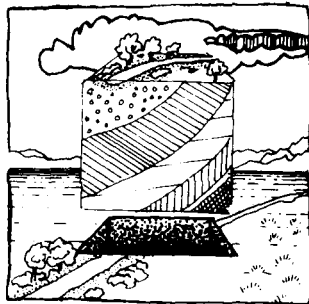
Fall Qtr Sec 1 **T**—6-8:50, BlegH 240, Adams

Geog 3371 URBAN GEOGRAPHY. 4 degree credits, \$56. (♦ \$28)

Character and distribution of cities in present-day world, including analysis of their development. Emphasis on internal and external locational relationships. (Prereq 1301, 1311, or ‡)

Spring Qtr Sec 1 **M**—6-8:45, BlegH 215, deSouza

geology and geophysics (Geo)



George R. Rapp, Jr., Associate Professor of Geology and Geophysics

Robert E. Sloan, Professor of Geology and Geophysics

James Stout, Assistant Professor of Geology and Geophysics

Paul W. Weiblen, Associate Professor of Geology and Geophysics

Geo 1001 PHYSICAL GEOLOGY. 4 degree credits, \$56 plus \$3 course fee. **Total \$59.** ★

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)

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

geology and geophysics—german

Fall Sem Sec 1 **Lect T**—6:20-8:00, PillsH 110, Rapp
Lab T—8:10-9:30, ForH 180

Spring Sem Sec 2 **Lect M**—6:20-8:00, PillsH 110, Weiblen
Lab M—8:10-9:30, ForH 180

Geo 1002 HISTORICAL GEOLOGY. 4 degree credits, \$56 plus \$3 course fee. **Total \$59.**
★

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**—6:20-8:00, PillsH 110, Sloan
Lab T—8:10-9:30, ForH 180

Geo 1008 GEOLOGY AND MAN. 4 degree credits, \$1001. \$56.

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**—6:20-8:00, PillsH 110, Sloan
Lab M—8:10-9:30, ForH 180

(See other environmental courses, page 171)

Geo 3102 PETROLOGY. 5 degree credits, \$70. (♦ \$35)

Introduction to the lithologic character and genesis of igneous and metamorphic rocks. (Prereq 3401 or ‡)

Spring Qtr Sec 1 **Lect TTh**—6:20-8:00, PillsH 125, Stout
Lab TTh—8:15-9:30, PillsH 125

Geo 5051 PHYSICAL GEOLOGY FOR TEACHERS. 4 degree credits, \$1001, 1003, 1111. \$60 plus \$3 course fee. **Total \$63.**

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**—6:20-8:00, PillsH 110, Rapp
Lab T—8:10-9:30, ForH 180

(See also Education)

Geo 5052 HISTORICAL GEOLOGY FOR TEACHERS. 4 degree credits, \$1002, 1004, 1112. \$60 plus \$3 course fee. **Total \$63.**

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**—6:20-8:00, PillsH 110, Sloan
Lab T—8:10-9:30, ForH 180

german (Ger)

Gerhard Clausing, Assistant Professor of German
Leonard L. Duroche, Associate Professor of German
Mark Lowry, Instructor in German

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

Edwin F. Menze, Professor of German
Thomas Plummer, Assistant Professor of German
Herman Ramras, Professor of German
Wolfgang Taraba, Professor of German
Ray Wakefield, Assistant Professor of German
Gerhard H. Weiss, Professor of German
Cecil Wood, Professor of German

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.-8 p.m., Monday-Thursday; 8 a.m.-6 p.m., Friday; 9 a.m.-3 p.m., Saturday; closed Sunday.

The following non-language classes may be applied toward the CLA foreign language requirement, Route 11 (see page 61); Ger 3531, 3541, 3604, 3610; Hist 5241, 5242, 5243.

1001-1002-1003 BEGINNING GERMAN: ORAL APPROACH

5 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 and television materials which will be available to students in the Learning Resources Center.

*Ger 1001-1002-1003 **BEGINNING GERMAN: ORAL APPROACH.** 5 degree credits each semester, \$70 plus \$3 course fee. **Total \$73 each semester.**

Beginning German Language for students with no previous knowledge of German; written and oral comprehension, speaking and basic writing skill. Grammar instruction is by computer. (To use the computer terminal no skill whatsoever except rudimentary typing ability is needed.) One-half of the homework is done at the computer terminal. Computer terminals are accessible from 8:30 a.m. until midnight. (No prereq for 1001; 1001 or * for 1002, 1002 or * for 1003. Limited to 25 students).

Fall Sem 1001 Sec 1 W—6:20-9:20, FoIH 205, Wood

1003 Sec 2 M—6:20-9:20, FoIH 205, Wood

Spring Sem 1002 Sec 3 W—6:20-9:20, FoIH 205, Wood

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 Upper Division German courses.

Ger 1101-1102 **BEGINNING GERMAN.** 5 degree credits each semester, \$70 plus \$3 course fee. **Total: \$73 each semester.** (♦ \$35 plus \$3 course fee. Total \$38 each semester)

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 for 1102).

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

german

- Fall Sem 1101** Sec 1 **M**—6:20-9:20, FolH 209, Weiss
Sec 2 **Th**—6:20-9:20, FolH 209, Ramras
Spring Sem 1101 Sec 3 **Th**—6:20-9:20, FolH 202, Ramras
1102 Sec 4 **M**—6:20-9:20, FolH 209, Weiss

Ger 1103 BEGINNING GERMAN. 5 degree credits, \$70. (♦ \$35)

A continuation of the 5-credit sequence in Beginning German. (Prereq 1102 or 2 years high school German)

- Fall Sem** Sec 1 **M**—6:20-9:20, FolH 302, Taraba

Ger 1110 INDIVIDUALIZED BASIC GERMAN. 1-15 degree credits, \$14 per credit plus \$3 course fee per quarter. (See special registration procedures, page xx).

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. (No prereq)

- Fall Qtr** Sec 1 **W**—6:20-8:50, Learning Resources Center, WaLib
Winter Qtr Sec 2 **W**—6:20-8:50, Learning Resources Center, WaLib
Spring Qtr Sec 3 **W**—6:20-8:50, Learning Resources Center, WaLib

(For further information on Ger 1110, see page 184)

Ger 1301 INTERMEDIATE GERMAN. 5 degree credits \$70. (♦ \$35) ★

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 3531 THE GERMANS IN AMERICA. 4 degree credits, \$56. (No knowledge of German required) (♦ \$28)

An introduction to the history of the German-speaking ethnic groups in America and their contributions to American life. Prior and concurrent socio-economic conditions and institutions in the countries of origin will be described. Immigration and acculturation patterns will be traced, with special emphasis on individuals, groups, and localities, such as: Frederick A. Muehlenberg, General Steuben, Albert Einstein, Wernher von Braun, Eike Sommer, Henry Kissinger; Minnesota Mennonites, Pennsylvania Germans; New Ulm, Anaheim, Germantown, Welslerland; etc. (No prereq. May be applied toward the CLA foreign language requirement, Route II, (see page 61)

- Fall Qtr** Sec 1 **T**—6:20-9:00, FolH 209, Clausing

Ger 3541 INTRODUCTION TO GERMAN FOLKLORE. 4 degree credits, \$56. (♦ \$28)

A survey and assessment of folklore phenomena, including German fairy tales, legends, and myths; proverbs, sayings, nursery rhymes riddles, jokes, and anecdotes; popular music and folk songs; superstitions and customs. The development of these phenomena will be studied, along with analysis of content and message of various examples of these genres, with some attention to their utilization and importance in the cultures of the German-speaking areas. (No prereq. May be applied toward the CLA foreign language requirement, Route II see page 61]. No knowledge of German required)

- Winter Qtr** Sec 1 **Th**—6:20-9:00, FolH 303, Clausing

Ger 3604 GERMAN LITERATURE IN TRANSLATION AND THE FILM. 4 degree credits, \$56. (No knowledge of German required) (♦ \$28)

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, Gunter Grass, and Peter Weiss. The premise that a history

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

german-dutch

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. (No prereq. May be applied toward the CLA foreign language requirement, Route II, (see page 61).

Spring Qtr Sec 1 T—6:20-9:40, AndH 210, Plummer

Ger 3610 MODERN GERMAN AUTHORS IN TRANSLATION: KAFKA. 4 degree credits, \$56. (♦ \$28)

Study in-depth of one author, such as Thomas Mann, Kafka, Hesse, Brecht, Grass, or others. Selection of authors will vary from time to time. 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 xx).

Winter Qtr Sec 1 T—6:20-9:00, FolH 201, Duroche

GERMAN FOR GRADUATE STUDENTS

The German language requirement for an advanced degree can be satisfied with a program of study based on Ger 0221 and Ger 0222. Ger 0221 or equivalent (2 quarters of beginning German or 2 years of high school German) is a prerequisite for Ger 0222. A final examination is administered at the conclusion of Ger 0222. If the student achieves a grade of "B" or better in this examination, the German Department will certify him as having satisfied the German language requirement for an advanced degree.

Ger 0221 GERMAN FOR GRADUATE STUDENTS. No credit, \$42. ★

This course is designed to help the graduate student 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—6:20-8:00, FolH 303, Menze

Ger 0222 GERMAN FOR GRADUATE STUDENTS. No credit, \$56. ★

This course is designed to give the graduate student the experience in intensive reading of German literary texts necessary to enable him to satisfy the departmental requirements for an advanced degree. The department will certify to the Graduate School a reading knowledge of German for those achieving a grade of "B" or better in the final examination which is part of the course. (Prereq 0221 or 2 quarters of beginning German or 2 years of high school German)

Spring Sem Sec 1 M—6:20-8:35, FolH 105, Wood

German 0221 and 0222 will be offered also as Summer Extension Classes.

dutch (Dut)

Dut 1101-1102-1103 BEGINNING DUTCH. 5 degree credits each quarter, \$70 each quarter.

1101: Introduction to basic skills. **1102:** Completion of Dutch grammar and basic reading experience. **1103:** Introductory composition and conversation in connection with extensive readings. (No prereq for 1101; 1101 for 1102; 1102 for 1103)

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

greek—history

Fall Qtr 1101 Sec 1 **TTh**—5:30-7:00, FoIH 207, Wakefield
Winter Qtr 1102 Sec 2 **TTh**—5:30-7:00, FoIH 205, Wakefield
Spring Qtr 1103 Sec 3 **TTh**—5:30-7:00, FoIH 303, Wakefield

greek

The following non-language Extension classes may be applied toward the CLA foreign language requirement, Route II (see page 61): Clas 1045, 1122, 5005, 5122, 5145; Hist 1052, 3052; Hum 1011; Phil 3001, 3002.

health

(See School Health Education)

health, environmental

(See Public Health)

health, public

(See Public Health)

hebrew

(See Middle Eastern Languages)

higher education and teacher education

(See Education)

history (Hist)



(See also GC 1221, MINNESOTA HISTORY [Social Studies]; and Continuing Education for Women, page 173)

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

Bernard S. Bachrach, Associate Professor of History
 Paul W. Bamford, Professor of History
 Hyman Berman, Professor of History
 Kinley J. Brauer, Associate Professor of History
 Peter Carroll, Associate Professor of History
 George Green, Associate Professor of History
 Allen F. Isaacman, Associate Professor of History
 Tom B. Jones, Professor of History
 David Kopf, Associate Professor of History
 Stanford E. Lehmborg, Professor of History
 Byron K. Marshall, Associate Professor of History
 Peyton McCrary, Assistant Professor of History
 David W. Noble, Professor of History
 Byron Nordstrom, Lecturer in History
 Jonathan Paradise, Assistant Professor of Hebrew
 Otto P. Pflanze, Professor of History
 Richard Rudolph, Assistant Professor of History
 Theofanis G. Stavrou, Professor of History
 Romeyn Taylor, Professor of History
 Thomas Todd, Instructor in History
 William E. Wright, Professor of History

Hist 1001-1002-1003 INTRODUCTION TO MODERN EUROPEAN HISTORY. 4 degree credits each quarter, \$3001-3002-3003. \$56 each quarter. (♦ \$28 each quarter)★

1001: Development of western European civilization, rise of national states, 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 240, Wright

Spring Qtr 1003 Sec 3 W—6:20-8:50, AndH 210, Wright

Hist 1051, 1052, 1053 ANCIENT CIVILIZATION. 3 degree credits each quarter, \$3051, 3052, 3053. \$42 each quarter. (♦ \$21 each quarter)★

1051: A survey of the rise of civilization in the Ancient Near East from the earliest times to 500 B.C. Emphasis is placed upon 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. **1052:** The history of the rise and flowering of the 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 literary, artistic, and philosophic achievement of that period. **NOTE-1052** may be applied toward the CLA foreign language requirement, Route II (see page 61). **1053:** 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: (a) the civilization of the ancient world at its peak, (b) the rise and flowering of Roman culture, and (c) the reasons for the decline of ancient civilization. Special attention will be paid to political institutions, art, literature, economics and society, philosophy, and ancient science. **NOTE-1053** may be applied toward the CLA foreign language requirement, Route II (see page 61). (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 Th—6-8:30, BlegH 10, Jones

Winter Qtr 1052 Sec 2 Th—6-8:30, BlegH 10, Jones

Spring Qtr 1053 Sec 3 Th—6-8:30, BlegH 10, Jones

(See also Classics; MidE 1501, 1502, 1503, The Background of the Bible; Hum 1011, The Greek Heritage)

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

history

Hist 1101, 1102, 1103 MEDIEVAL AND RENAISSANCE HISTORY. 4 degree credits each quarter, \$3101, 3102, 3103. \$56 each quarter. (♦ \$28 each quarter)

1101: The early Middle Ages, decline of Rome, the barbarian kingdoms. Carolingian empire. **1102:** The high Middle Ages, feudal Europe, medieval culture. **1103:** The later Middle Ages and early Renaissance, rise of national monarchies, art, learning and literature. (No prereq. Meets concurrently with 3101, 3102, 3103)

Fall Qtr 1101 Sec 1 **W**—6:30-9:00, BlegH 235, Bachrach

Winter Qtr 1102 Sec 2 **W**—6:30-9:00, BlegH 235, Bachrach

Spring Qtr 1103 Sec 3 **W**—6:30-9:00, BlegH 235, Bachrach

Hist 1151, 1152, 1153 ENGLISH HISTORY. 4 degree credits each quarter, \$3151, 3152, 3153. \$56 each quarter. (♦\$28 each quarter) ★1151, 1152.

1151: Conquest and settlement, feudal age, foreshadowings of limited monarchy and popular government. **1152:** Tudors, Stuarts, and Hanoverians, parliament versus king, colonization and American Revolution. **1153:** Coming of democracy, Britain and Europe, empire and commonwealth. (No prereq. Meets concurrently with 3151, 3152, 3153)

Fall Qtr 1151 Sec 1 **M**—6:20-8:50, BlegH 235

Winter Qtr 1152 Sec 2 **M**—6:20-8:50, BlegH 150

Spring Qtr 1153 Sec 3 **M**—6:20-8:50, BlegH 235

Hist 1301, 1302 AMERICAN HISTORY. 4 degree credits each quarter. \$56 each quarter. (♦ \$28 each quarter) ★

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 crises. **1302:** Modern America. (No prereq)

Fall Qtr 1301 Sec 1 **M**—7-9:30, Kel HS 235, McCrary

1302 Sec 2 **Th**—6:30-9:00, BlegH 240, McCrary

Winter Qtr 1301 Sec 3 **Th**—6:20-8:50, BlegH 135, Berman

1302 Sec 4 **M**—7-9:30, Kel HS 235, Green

Spring Qtr 1301 Sec 5 **M**—6:20-8:50, BlegH 135, Carroll

1302 Sec 6 **Th**—6:20-8:50, BlegH 135, Berman

(See also American Studies)

***Hist 1310 TOPICS IN AMERICAN HISTORY.** 4 degree credits, \$56.

Part of an integrated series "Values in Transition: an Examination of Forces Acting on the Individual in Modern America."

and social thought in modern American history. The historical development of some social, economic and political forces of our own times: large-scale organization, ethnic and religious factors, changing patterns of social and occupational mobility, urbanization, industrialization. Some related themes of social and political thought and ideology in modern America: the quest for community, individualism, social planning and management, urbanism. (Prereq concurrent registration in *AmSt 1101 or 3111. Limited to 50 students)

Fall Sem Sec 1 **T**—8:15-9:55, BlegH 110, Todd

Hist 1433 HISTORY OF AFRICA. 4 degree credits, \$3433. \$56 (♦\$28)

From the 19th century European arrival to the present. (No prereq. Meets concurrently with 3433. May be applied to the CLA foreign language requirement, Route II [see page 61])

Spring Qtr Sec 1 **T**—6:20-8:50, BlegH 205

N
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W

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

Hist 1451 HISTORY OF ASIA. 4 degree credits, \$3451. \$56. (◆\$28)

Ancient World: Birth of civilizations in China, Hindus Valley and Sumer, formation of classical traditions; thought of Confucius, Buddha and other reformers. (No prereq. Meets concurrently with 3451)

Fall Qtr Sec 1 **W**—6:20-8:50, BlegH 205, Kopf, Marshall, Taylor

Hist 1452 HISTORY OF ASIA. 4 degree credits, \$3452. \$56. (◆\$28)

Asia in the Middle Period: The rise of universal religions (Buddhism, Hinduism, Islam), the Mongol explosion, and Asian empires at their height prior to European Expansion. (No prereq. Meets concurrently with 3452)

Winter Qtr Sec 1 **W**—6:20-8:50, BlegH 205, Kopf, Marshall, Taylor

Hist 1453 HISTORY OF ASIA. 4 degree credits, \$3453. \$56. (◆\$28)

Modern Asia: The impact of Europe, nationalism and modernization in India, China, Japan and the Arab world. (No prereq. Meets concurrently with 3453)

Spring Qtr Sec 1 **W**—6:20-8:50, BlegH 225, Kopf, Marshall, Taylor

Hist 3001, 3002, 3003 INTRODUCTION TO MODERN EUROPEAN HISTORY. 4 degree credits each quarter, \$1001, 1002, 1003. \$56 each quarter. (◆\$28 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 240, Wright

Spring Qtr 3003 Sec 3 **W**—6:20-8:50, AndH 210, Wright

Hist 3051, 3052, 3053 ANCIENT CIVILIZATION. 3 degree credits each quarter, \$1051, 1052, 1053. \$42 each quarter.

See course description for Hist 1051, 1052, 1053. **NOTE**—3052 and 3053 may be applied toward CLA foreign language requirement, Route II (see page 61). (No prereq. Meets concurrently with 1051, 1052, 1053)

Fall Qtr 3051 Sec 1 **Th**—6-8:30, BlegH 10, Jones

Winter Qtr 3052 Sec 2 **Th**—6-8:30, BlegH 10, Jones

Spring Qtr 3053 Sec 3 **Th**—6-8:30, BlegH 10, Jones

Hist 3101, 3102, 3103 MEDIEVAL AND RENAISSANCE HISTORY. 4 degree credits each quarter, \$1101, 1102, 1103. \$56 each quarter.

See course description for Hist 1101, 1102, 1103. (No prereq. Meet concurrently with 1101, 1102, 1103)

Fall Qtr 3101 Sec 1 **W**—6:30-9:00, BlegH 235, Bachrach

Winter Qtr 3102 Sec 2 **W**—6:30-9:00, BlegH 235, Bachrach

Spring Qtr 3103 Sec 3 **W**—6:30-9:00, BlegH 235, Bachrach

Hist 3151, 3152, 3153 ENGLISH HISTORY. 4 degree credits each quarter, \$1151, 1152, 1153. \$56 each quarter.

See course description for Hist 1151, 1152, 1153. (No prereq. Meet concurrently with 1151, 1152, 1153)

Fall Qtr 3151 Sec 1 **M**—6:20-8:50, BlegH 235

Winter Qtr 3152 Sec 2 **M**—6:20-8:50, BlegH 150

Spring Qtr 3153 Sec 3 **M**—6:20-8:50, BlegH 235

Hist 3224, 3225, 3226 WORLD WAR II. 4 degree credits each quarter, \$5224, 5225, 5226. \$56 each quarter. (◆\$28 each quarter)

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)

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

history

Fall Qtr 3224 Sec 1 T—6:30-9:00, AndH 230, Nordstrom
Winter Qtr 3225 Sec 2 T—6:30-9:00, AndH 230, Nordstrom
Spring Qtr 3226 Sec 3 T—6:30-9:00, AndH 230, Nordstrom

Hist 3421-3422 THE WORLD AND THE WEST (Offered through Continuing Education for Women; see page 000)

Hist 3433 HISTORY OF AFRICA. 4 degree credits, \$1433. \$56.

See course description for 1433. (No prereq. Meets concurrently with 1433. May be applied toward to CLA foreign language requirement, Route II [see page 61])

Spring Qtr Sec 1 T—6:20-8:50, BlegH 235

Hist 3451 HISTORY OF ASIA. 4 degree credits, \$1451. \$56.

See course description for Hist 1451. (No prereq. Meets concurrently with 1451)

Fall Qtr Sec 1 W—6:20-8:50, BlegH 205, Kopf, Marshall, Taylor

Hist 3452 HISTORY OF ASIA. 4 degree credits, \$1452. \$56.

See course description for Hist 1452. (No prereq. Meets concurrently with 1452)

Winter Qtr Sec 1 W—6:20-8:50, BlegH 205, Kopf, Marshall, Taylor

Hist 3453 HISTORY OF ASIA. 4 degree credits, \$3453. \$56.

See course description for Hist 1453. (No prereq. Meets concurrently with 1453)

Spring Qtr Sec 1 W—6:20-8:50, BlegH 225, Kopf, Marshall, Taylor

Hist 3471 TWENTIETH CENTURY JAPAN. 4 degree credits, \$5471. \$56. (♦\$28)

A comprehensive history of Japanese modernization. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 61]. Meets concurrently with 5471)

Fall Qtr Sec 1 M—6:20-8:50, BlegH 215, Marshall

(See also Jpn 1005-1006, Beginning Spoken Japanese and Eas 1001-1002, The East Asian Heritage)

Hist 3472 EARLY MODERN JAPAN. 4 degree credits, \$5472. To be offered 1975-76.

Hist 3501, 3502, 3503 ANCIENT ISRAEL. 3 degree credits each quarter, \$MidE 1501, 1502, 1503, 3501, 3502, 3503. \$42 each quarter (♦\$28 each quarter)

History of Israel and development of its religion as seen against background of ancient Near East. Special attention given to bearing of civilization of ancient Mesopotamia and Egypt on cultural and social aspects of the Bible. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 61]. No knowledge of Hebrew required. Meets concurrently with MidE 1501, 1502, 1503, 3501, 3502, 3503)

Fall Qtr 3501 Sec 1 T—6:20-8:50, NH 122, Paradise

Winter Qtr 3502 Sec 2 T—6:20-8:50, NH 122, Paradise

Spring Qtr 3503 Sec 3 T—6:20-8:50, NH 122, Paradise

Hist 3821, 3822, 3823 THE UNITED STATES IN THE TWENTIETH CENTURY. 4 degree credits each quarter, \$56 each quarter. (♦\$28 each quarter)

Political, economic, diplomatic, and social history of United States from Spanish-American War to present. **3821:** From 1808 to 1914. **3822:** From 1914 to 1932. **3823:** From 1932 to present. (No prereq)

Fall Qtr 3821 Sec 1 Th—6:20-8:50, BlegH 120, Noble

Winter Qtr 3822 Sec 2 Th—6:20-8:50, BlegH 120, Noble

Spring Qtr 3823 Sec 3 Th—6:20-8:50, BlegH 120, Noble



Hist 3835 HISTORY OF CIVIL LIBERTIES AND CIVIL RIGHTS IN THE UNITED STATES.

A series of 10 one-hour television programs. A history of the development and protection of individual and personal freedom in modern America, with emphasis upon the way that American public and private agencies have attempted to guarantee traditional rights in periods of national tension from assaults both by the majority, through government, and by private power groups. Special consideration is given to the modern formalization of traditional American values—liberty, justice, equality in a complex, diverse bureaucratic society.

Program Titles: A Case Study of Japanese Americans; Civil Rights: From Desegregation to Black Power; The Right to Vote; Free Speech: Dissent and Protest; Censorship; Freedom of the Press; The Modern Issue of Church State Relations; Privacy; Criminal Procedure, and the Law and Order Issue; Gideon's Trumpet, The Right to Counsel, The Future of Civil Liberties.

● CREDIT REGISTRATION

4 degree credits, \$5335. \$56 plus \$4 special fee (study guide). **Total \$60** (texts extra). In addition to viewing the television broadcasts, registrants will be expected to read texts, write an essay and take the final examination at home. The study guide will be mailed upon registration. (No prereq. Meets concurrently with 5335)

● STUDY GUIDE ONLY

For home viewers who do not wish to register for credit but want to follow the television lectures, a study guide may be purchased from Extension Classes for \$4.

● MATERIALS

Textbooks: *Freedom and the Court*, Henry J. Abraham; *The Right to Know*, William H. Marnell; *Gideon's Trumpet*, Anthony Lewis; "The Japanese American Cases—A Disaster," *Yale Law Journal*, LIV, June, 1945. "From Civil Rights to Black Power: The Case of SNCC, 1960-1966," Bobbs-Merrill Reprint, H-444, Allen J. Matusow. Books may be purchased from the Harold Smith west bank bookstore in person or by mail. See **bookstores**, page 23 and maps, page 325.

Spring Qtr Sec 1 **M**—9-10:00, KTCA-TV, Channel 2; Murphy

Hist 3841 AMERICAN BUSINESS HISTORY. 5 degree credits, \$70. (◆\$35)

A study of the creative role of business leaders and of the development of business institutions in American history. The course will examine such themes as the interaction of business with economic development, social values, and government economic policies. (No prereq)

Spring Sem Sec 1 **Th**—6:20-8:50, BlegH 340, Green

(For further information on Hist 3841, see page 189)

Hist 3882 HISTORY OF AMERICAN FOREIGN POLICY. 4 degree credits, \$56. (◆\$28)

American foreign policy since 1900. (No prereq)

Fall Qtr Sec 1 **W**—6:20-8:50, BlegH 120, Brauer

Hist 5151, 5152, 5153 MODERN ENGLAND: TUDOR AND STUART PERIODS. 4 degree credits each quarter. \$60 each quarter. (◆\$30 each quarter)

5151: 1485 to 1558. **5152:** 1558 to 1625. **5153:** 1625 to 1689. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr 5153 Sec 1 **M**—6:20-8:50, BlegH 240, Lehberg

Winter Qtr 5152 Sec 2 **M**—6:20-8:50, BlegH 240, Lehberg

Spring Qtr 5151 Sec 3 **M**—6:20-8:50, BlegH 240, Lehberg

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

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history

Hist 5211, 5212 FRENCH REVOLUTION. 4 degree credits each quarter, \$60 each quarter (♦\$30 each quarter)

5211: Background and emergence of the Revolution. **5212:** The Revolution and revolutionary wars. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 61]. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr 5211 Sec 1 T—6:20-8:50, BlegH 404, Bamford

Spring Qtr 5212 Sec 2 T—6:20-8:50, BlegH 404, Bamford

Hist 5241, 5242, 5243 HISTORY OF GERMANY. 4 degree credits each quarter, \$60 each quarter (♦\$30 each quarter)

5241: From 911 to 1648. **5242:** From 1648 to 1814. **5243:** From 1815 to 1933. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 61]. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr 5241 Sec 1 W—6-8:30, AndH 230, Pflanze

Spring Qtr 5242 Sec 2 W—6-8:30, AndH 230, Pflanze

Summer Qtr 5243 Sec 3 W—6-8:30, AndH 230, Pflanze

(See also German)

Hist 5264, 5265, 5266 MODERN RUSSIA. 4 degree credits each quarter, \$60 each quarter (♦\$30 each quarter) ★ 5266.

5264: The 18th-century background. **5265:** The 19th-century. **5266:** The fall of the Russian monarchy; the revolutions and the Soviet Regime. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 61]. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr 5264 Sec 1 M—6:20-8:50, BlegH 205, Stavrou

Winter Qtr 5265 Sec 2 M—6:20-8:50, BlegH 205, Stavrou

Spring Qtr 5266 Sec 3 M—6:20-8:50, BlegH 255, Stavrou

N **Hist 5289 HISTORY OF EUROPEAN PENAL SYSTEMS.** 4 degree credits, \$60. (♦\$30)

E Comparative analysis of European systems. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

W **Fall Qtr** Sec 1 T—6:20-8:50, BlegH 440, Bamford

TV

Hist 5335 HISTORY OF CIVIL LIBERTIES AND CIVIL RIGHTS IN THE UNITED STATES.

A series of 10 one-hour television programs. See course description for 3835.

● CREDIT REGISTRATION

4 degree credits, \$3835. \$60 plus \$4 special fee (study guide). Total \$64 (texts extra). Study guide will be mailed upon registration. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 M—9-10:00, KTCA-TV, Channel 2; Murphy

Hist 5361, 5362 DEVELOPMENT OF THE AMERICAN POLITICAL PROCESS. 4 degree credits each quarter, \$60 each quarter. (♦\$30 each quarter)

The role of political culture in shaping voting behavior, the impact of party development on processes of governance, and the ways in which politics reflects broader social and cultural themes. **5361:** Colonial Period through the First Party System. **5362:** Mass political parties, critical elections, and the Civil War

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

history—college of home economics

Party System, 1828-1896. (No prereq. Qualified students may register for graduate credit at the University of Minnesota.)

Winter Qtr 5361 Sec 1 T—6:20-8:50, SocSci 860, McCrary

Spring Qtr 5362 Sec 2 T—6:20-8:50, SocSci 860, McCrary

See also Political Science)

Hist 5471 TWENTIETH CENTURY JAPAN. 4 degree credits, \$3471. \$60.

See course description for Hist 3471. (No prereq. Meets concurrently with 3471. May be applied toward the CLA foreign language requirement, Route II [see page 61]. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 M—6:20-8:50, BlegH 215, Marshall

college of home economics

See the following alphabetical departmental listings for course offerings:

DESIGN (page 146)

- Use of Color, Dsgn 1520
- Layout for Interior Design, Dsgn 1528
- Interior Design I, Dsgn 1555
- Interior Design II, Dsgn 1556
- History of Traditional Furniture, Dsgn 3512
- Seminar in Interior Design, Dsgn 3555
- Seminar in Interior Design, Dsgn 3556
- Interior Design Clinic, Dsgn 3560-3561
- Contract Design Seminar, Dsgn 3577-3578

FAMILY SOCIAL SCIENCE (page 203)

- Dynamics of Dating, Courtship and Marriage, FSoS 1001
- Dynamics of Marriage and Parenthood, FSoS 1002
- Parenthood, FSoS 1025
- Life Styles of Educated American Women, FSoS 3015
- Human Sexual Behavior, FSoS 5001
- Family Relationship, FSoS 5200

FOOD SCIENCE AND NUTRITION (page 207)

- Understanding Cheese, FScN 1030
- Home Preservation of Foods, FScN 1215
- Meat Science, FScN 1500
- Family Nutrition, FScN 1603
- Food Chemistry, FScN 3110
- Food Microbiology, FScN 5120
- Sanitation and Process Microbiology, FScN 5122
- Sensory Evaluation of Food Quality, FScN 5360
- Experimental Study of Foods, FScN 5403
- Current Issues in Food and Nutrition, FScN 5405
- Advanced Topics in Sensory Evaluation, FScN 5462
- Meat and Protein Technology, FScN 5512
- Field Experience in Clinical Nutrition, FScN 5664
- Design and Layout of Food Services, FScN 5740
- Selected Aspects of Food Service and Hospitality Business Management, FScN 5750

HOME ECONOMICS EDUCATION (page 322)

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

home economics—horticultural science

For information about credit courses given in suburban or out-state locations please write or call Dr. Roxana Ford, Associate Dean, College of Home Economics, University of Minnesota, St. Paul, Minnesota 55108, telephone 373-0935.

home economics

For a brochure listing credit courses in Home Economics, please write or call Dr. Roxana Ford, Associate Dean, College of Home Economics, University of Minnesota, St. Paul, Minnesota 55108, telephone 373-0935.

horticultural science (Hort)

(See also Landscape Architecture)



D.W. Davis, Professor of Horticultural Science
Mervin Eisel, Instructor in Horticultural Science
C.G. Hard, Professor of Horticultural Science
Leonard Hertz, Associate Professor of Horticultural Science
Robert Mullin, Associate Professor of Horticultural Science
Harold M. Pellett, Associate Professor of Horticultural Science
Kenneth E. Simons, Instructor in Horticultural Science
Leon Snyder, Professor of Horticultural Science
Cecil Stushnoff, Associate Professor of Horticultural Science
O.C. Turnquist, Professor of Horticultural Science
D.B. White, Professor of Horticultural Science
Harold F. Wilkins, Associate Professor of Horticultural Science

Hort 1001 FUNDAMENTALS OF HORTICULTURE. 4 degree credits, \$56 plus \$2 course fee. **Total \$58.**

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; Snyder (♦ \$28 plus \$2 course fee. Total \$30. Books available at Arboretum Gift Shop)

Spring Qtr Sec 2 **M**—6-9:30, HortS 415, StP Campus, Turnquist (Limit 6 students*)

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

horticultural science

Hort 1010 HOME LANDSCAPE GARDENING AND DESIGN. 3 degree credits, \$42 plus \$2 course fee. **Total \$44 ★**

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 applied to a home property of the student's own choosing. Lectures, lab. (No prereq)

Fall Qtr Sec 1 **W**—6:20-8:50, HrG 172, StP Campus
Th—6:20-8:50, HrG 172, StP Campus, Mullin

Winter Qtr Sec 3 **T**—7-9:30, Research and Education Bldg, Minnesota Landscape Arboretum (west of Rt 41 on Hwy 5) Chaska; Eisel (◆ \$21 plus \$2 course fee. Total \$23). Books available at Arboretum Gift Shop

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 CROP EVALUATION. 4 degree credits, \$56 plus \$2 course fee. **Total \$58.**

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 noncommercial exhibits. Lectures, laboratory, and reference reading. (No prereq)

Fall Sem Sec 1 **M**—6-9:20, HrG 172, StP Campus, Turnquist

Hort 1021 PLANT MATERIALS I. 4 degree credits, \$56.

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 **Th**—6-9:20, HortS 415, StP Campus, Mullin
Sec 2 **S**—9:30 a.m.-1:00, Research and Education Bldg, Minnesota Landscape Arboretum (west of Rt 41 on Hwy 5) Chaska; Snyder (◆ \$28) Books available at Arboretum Gift Shop.

Hort 1022 PLANT MATERIALS II. 4 degree credits. **To be offered summer, 1975.**

Minnesota Landscape Arboretum, Chaska.
(Call for summer brochure of classes in April, 1975 (373-3195))

***Hort 3026 RESIDENTIAL LANDSCAPE DESIGN.** 4 degree credits, \$56 plus \$2 course fee. **Total \$58. ★**

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 LA 1024 or 1025, Hort 1021 or professional design experience. Limited to 25 students)

Winter Qtr Sec 1 **W**—6-9:20, HortS 415, StP Campus, Hard

Hort 3031 FRUIT SCIENCE. 3 degree credits, \$42.

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 and herbicides. Lectures and reference readings. (Prereq Hort 1001 or 1010)

Winter Qtr Sec 1 **T**—6:20-8:50, HortS 415, StP Campus, Stushnoff, Hertz

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

horticultural science—how to study

Hort 3032 VEGETABLE SCIENCE. 3 degree credits, \$42 plus \$2 course fee. **Total \$44.**
(♦ \$21 plus \$2 course fee. Total \$23)

Principles of vegetable agriculture, including reference to world food problems; geography of production; scope of the industry; physiological adaptation of species as food for man; and such principles of production practice as propagation, irrigation, nutrition, seed production, and postharvest handling. (Prereq 1001 or 1010)

Winter Qtr Sec 1 **Th**—6:20-8:50, HortS 415, StP Campus, Davis

***Hort 3076 ARBORICULTURE.** 4 degree credits, \$56 plus \$2 course fee. **Total \$58.**

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, 3074, or For 1100 or †. Limited to 30 students)

Winter Qtr Sec 1 **MW**—3:30-5:30, HrG 172, StP Campus, Simons

***Hort 3077 INTRODUCTION TO FLORAL DESIGN.** 3 degree credits, \$42 plus \$20 course fee. **Total \$62.**

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 **W**—6-9:00, HortS 423, StP Campus, Wilkins

***Hort 5020 HORTICULTURAL TECHNIQUES FOR EDUCATION MAJORS.** 3 degree credits, \$45 plus \$2 course fee. **Total \$47.**

Study of Horticultural and Botanical concepts and their impact on the use of horticultural plants in the classroom. Development of specific single concept classroom demonstration and pupil-oriented activities relating to horticultural plants. (Prereq teachers, education major or †. Limited to 50 students. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **Th**—6:20-8:50, Classroom Building, Minnesota Landscape Arboretum (West of Rt 41 on Hwy 5) Chaska; Pellett

(See also Education)

***Hort 5042 TURF MANAGEMENT.** 4 degree credits, \$60 plus \$4 course fee. **Total \$64.**

Taxonomy, ecology, and culture of grasses for landscape purposes. Included are basic principles, terminology, construction, maintenance, and soil-plant relationships in turf management for lawns, golf courses, athletic fields, and production operations. Lecture and laboratory. (Prereq 1001, Soil 1122 or †. Limited to 30 students. Qualified students may register for graduate credit at the University of Minnesota)

Sp Term Sec 1 **Feb. 10-April 14** **M**—6:20-8:50 HortS 415, StP Campus, White

hospital administration

For information on non-credit conferences or workshops in hospital administration, please contact Vernon Weckwerth, 1260 Mayo; telephone 373-8052 or 373-9661.

how to study

(See Study Skills)

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

humanities (Hum)

(College of Liberal Arts)

(See also American Studies; Humanities [GC]; History; and Continuing Education for Women, page 173)

*Gary Alley, Assistant Professor of Humanities and German**Joseph Altholz, Professor of History**George Bauer, Associate Professor of French and Humanities**Paul P. D'Andrea, Associate Professor of Humanities**Jackson Hershbell, Associate Professor of Classics**J. Dennis Hurrell, Professor of English and Theatre Arts**George Kliger, Assistant Professor of Humanities and Philosophy**Richard Leppert, Assistant Professor of Humanities**Mark Lowry, Instructor in German**Mischa Penn, Assistant Professor of Humanities**Mordecai Roshwald, Professor of Humanities**Robert B. Tapp, Professor of Humanities***Hum 1001 HUMANITIES IN THE MODERN WORLD I.** 5 degree credits, \$3001. \$70.
(♦ \$35) ★

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 285Sec 2 **Th**—6:20-9:40, Rich HS 221, Lowry**Winter Qtr** Sec 3 **M**—6:20-9:40, ForH 285, Leppert**Spring Qtr** Sec 4 **M**—6:20-9:40, ForH 285, Leppert**Hum 1002 HUMANITIES IN THE MODERN WORLD II.** 5 degree credits, \$3002. \$70.
(♦ \$35) ★

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)

Fall Qtr Sec 1 **T**—6:20-9:40, ForH 285, Hershbell**Spring Qtr** Sec 2 **T**—6:20-9:40, ForH 285, Hershbell**Hum 1003 HUMANITIES IN THE MODERN WORLD III.** 5 degree credits, \$3003. \$70.
(♦ \$35) ★

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)

Fall Qtr Sec 1 **W**—6:20-9:40, ForH 130, Penn**Spring Qtr** Sec 2 **Th**—6:20-9:40, ForH 175**Hum 1004 HUMANITIES IN THE MODERN WORLD IV.** 5 degree credits, \$3004. \$70
(♦ \$35) ★

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 Sem Sec 1 **Th**—6:20-9:40, ForH 130, Alley**Hum 1101 THE LIFE OF THE MIND.** 5 degree credits, \$70. (♦ \$35)

Exploration of some of the available ways of "reading" poetry, sculpture, history, philosophy, painting, rhetoric, music and film by studying works by a

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

humanities

variety of creative persons such as Stevens, Einstein, Henry Moore, Bach, Lincoln, Plato, Genet, Euclid and Fellini. (No prereq)

Winter Qtr Sec 1 **W**—6:20-9:40, ForH 130, D'Andrea

Hum 3003 HUMANITIES IN THE MODERN WORLD. 5 degree credits, \$1003. \$70. (◆ \$35)

See course description for Hum 1003. (No prereq)

Fall Qtr Sec 1 **W**—6:20-9:40, ForH 170, Tapp

Hum 3004 HUMANITIES IN THE MODERN WORLD. 5 degree credits, \$1004, Rhet 3381. \$70.

See course description for 1004. More readings, papers. (Prereq junior or senior)

Spring Qtr Sec 1 **Th**—6:20-9:40, ForH 120, Kliger

Hum 3005 HUMANITIES IN THE MODERN WORLD. 5 degree credits, \$70. (◆ \$35)

The intellectual climate of the Western world since World War II. The worlds of existentialism and "the absurd;" alienation, irrationalism, the new theology and the influence of Zen. Readings in Buber, Camus, Hesse, Ionesco, Genet, Bultmann, Tillich, and others. (Prereq 1004 or 3004)

Winter Qtr Sec 1 **Th**—6:20-9:40, ForH 285, Kliger

Hum 3006 THE CREATIVE IMAGINATION IN THE 20TH CENTURY. 5 degree credits, \$70. (◆ \$35)

Aspects of creativity in the 20th century through study of major works of painters, sculptors, musicians, and writers such as Marcel Duchamp, Pablo Picasso, John Cage and Andre Gide. The choice of artists will vary. (No prereq)

Fall Qtr Sec 1 **M**—6:20-9:40, ForH 102, Bauer

Hum 3049 SCIENCE AND HUMANITIES. 5 degree credits, \$70. (◆ \$35)

Examines warfare between two cultures, scientific and humanistic, through consideration of decisive documents from Ficino and Vives to recent work of Polanyi, Koestler, Bronowski, and A. Huxley. (Prereq junior, senior or §)

Spring Qtr Sec 1 **M**—6:20-9:40, ForH 130, Penn

Hum 3071 SELF REALIZATION IN 20TH CENTURY LITERATURE. 5 degree credits, \$70. (◆ \$35)

The quest for meaning and the process of individuation critically explored in works of 20th century literature. To offer an intensive examination of a number of eminently representative literary works of the 20th century which embody the themes of the individual's quest for meaning and self realization. (Prereq junior, senior, or §)

Fall Qtr Sec 1 **Th**—6:20-9:40, ForH 102, Kliger

Hum 3101 THE MEANING OF HUMANITY. 4 degree credits, \$56. (◆ \$28)

The problem of the essence of man and the factors determining his course, explored through a variety of theories such as those of Marx, Freud, Plato. Some work on the impact of technology on human conditions and the theory of social groups. (No prereq)

Fall Qtr Sec 1 **Th**—6:20-8:50, BlegH 330, Roshwald

Hum 3301 A TIME TO LAUGH. 5 degree credits, \$70. (◆ \$35)

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)

Fall Qtr Sec 1 **T**—6:20-9:40, ForH 102, D'Andrea

Hum 3666 THE MIND AND ART OF VICTORIAN ENGLAND. 4 degree credits, \$56. (◆ \$28)

Introduction to a variety of writers, thinkers and artists of Victorian England, given in association with a public lecture series and art exhibit. To enlarge the

See symbols, page 33.

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humanities

educational experience, students will attend the free public lecture series, "The Mind and Art of Victorian England," and visit the Victorian art exhibit scheduled at that time. At an introductory level, a rounded picture of the intellectual climate of Victorian England will be presented to enhance the student's appreciation of the writings and art of that period. (Prereq junior, senior or §)

Fall Qtr Sec 1 **Th**—6-7:45, AndH 350, Altholz

(For further information on Hum 3666, see page 182)

***Hum 5021-5022-5023 NEW WORLDS OF KNOWLEDGE.** 3 degree credits each quarter, \$45 plus \$10 special fee. **Total \$55** each quarter.

Developments in recent years in the sciences, music, art and literature with emphasis on common problems and unifying concepts. Guest lecturers from various departments. (No prereq for 5021; 5021 for 5022; 5022 for 5023. Limited to 30 students. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr 5021 Sec 1 **Th**—7-9:30, FoIH 305, Hurrell

Winter Qtr 5022 Sec 2 **Th**—7-9:30, FoIH 305, Hurrell

Spring Qtr 5023 Sec 3 **Th**—7-9:30, FoIH 305, Hurrell

humanities

(General College-GC)

Jerome Gates, Professor

Paul Hagen, Associate Professor

Norman W. Moen, Professor

Candido Zanoni, Associate Professor

The Humanities. General College courses in the arts, philosophy, and literature are designed to enlarge the student's understanding of the human experience, to help him gain insight into himself and his personal relationships, and to make him more aware of the world in which he lives.

***GC 1311 GENERAL ARTS.** 4 degree credits, \$56.

The student is given the opportunity to evaluate his 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 **Th**—6:20-8:50, NH 111, Gates

(See also Architecture and Art History)

GC 1357 MAN'S RELIGIOUS BELIEFS. 4 degree credits, \$56. (♦ \$28)

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)

Spring Qtr Sec 1 **T**—7-9:30, NH 209, Zanoni

(See other courses related to religion, page 181)

GC 1374 LITERATURE: THEATRE—FILM AND DRAMA. 4 degree credits, \$56 plus \$4 special fee. **Total \$60.** (♦ \$28 plus \$4 special fee. Total \$32) ★

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 **W**—6:30-9:00, FoIH 305, Hagen

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

human relations—industrial eng/operations research

GC 3846 MINNESOTA ARTS AND LETTERS. 4 degree credits, \$56. (♦ \$28)

Art, architecture, landscape design, music, literature and higher education. 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**—6:20-8:50, FolH 307, Moen

human relations

(See Educ 5305, page 158)

indic

(See South Asian Studies)

industrial education

(See Vocational Education)

industrial engineering/operations research (IEOR)

(See also Professional Development Recognition Program in Engineering and Science, page 194)

(See also IT 0001, Refresher Course in Engineering Fundamentals, page 194)

Sant R. Arora, Associate Professor of Mechanical Engineering

James L. Reynolds, Instructor in Mechanical Engineering

John S. White, Professor of Mechanical Engineering

Your attention is called to the Undergraduate Development Certificate in Industrial Engineering—90 credits, page 94.

IEOR 0100C INDUSTRIAL ENGINEERING AND MANAGEMENT. 5 certificate credits, \$70.

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**—6-9:00, MechE 302, Arora

IEOR 0210C MOTION AND TIME STUDY. 5 certificate credits, \$70 plus \$1 special fee. **Total \$71. ★**

Principles and techniques for effective work methods and analysis. Process charts, flow diagrams, paper work systems, work distribution tables, micro-motion 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**—6-9:00, MechE 302

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

industrial eng/operations research

NEW

IEOR 0330C MANUFACTURING COST ANALYSIS. 3 certificate credits, \$42.

A study of sources and uses of cost data to make industrial engineering decisions and to reduce manufacturing costs. Covers basic accounting principles and procedures, accumulation and allocation of costs, and budgeting. (Prereq Math 0009 or §)

Fall Sem Sec 1 Th—6:20-8:00, MechE 221

IEOR 0408C CORPORATE STANDARD DATA (C.S.D.) I. 5 certificate credits, \$70.

Corporate Standard Data is a procedure for analyzing manual work in terms of elemental motions for which standard times have been established. C.S.D. is a valuable tool for simplifying work methods and for setting accurate and consistent time standards for incentive, planning, estimating, and cost control. Lectures, discussions and demonstrations will be integrated with practice in the application of C.S.D. to factory and office operations. (No prereq)

Fall Sem Sec 1 T—6:20-9:20, MechE 180

IEOR 0409C CORPORATE STANDARD DATA (C.S.D.) II. 5 certificate credits, \$70.

An entirely new and original approach in the field of standard data and work measurement. Reduce engineering analysis time 50 to 75 percent—enable economic setting of standards on hard-to-measure direct work, indirect work, long cycle work, single item production, short runs of great variety, estimating, methods work, etc. Reduce labor costs systematically on an integrated corporate-wide or small company basis in manufacturing, offices, maintenance, tool making, warehousing, handling, etc. Discussions as to how this technique may be computerized. (Prereq IEO 0408C or §)

Spring Sem Sec 1 T—6:20-9:20, MechE 180

IEOR 0410C INTRODUCTION TO OPERATIONS RESEARCH. 5 certificate credits, \$70.

Formulation, interpretation, and solution of the assignment, transportation and general linear programming problems. Discussion of problems involving game theory, waiting lines, sequencing, replacement, dynamic and convex programming, and Monte Carlo methods. Applications of these techniques to general industrial problems, and in particular to problems of product mix, distribution, production scheduling, staffing and simulation. (Prereq Math 0009 or §; IEO 0360C is recommended but not required)

Fall Sem Sec 1 M—6-9:00, MechE 221

***IEOR 0610C STATISTICS AND PROCESS IMPROVEMENT.** 5 certificate credits, \$70.

Basic probability and statistics, test of significance for determining difference in process average and variability, linear correlation, non-parametric and shortcut statistics, and fundamentals of analysis of variance and designed experiments. For individuals involved in quality control, process and production engineering and related field. (Prereq college algebra or §. Limited to 25 students)

Fall Sem Sec 1 M—6-9:20, MechE 202

***IEOR 0611C STATISTICAL process control.** 5 certificate credits, \$70.

Objectives, methods and application of process control charts and acceptance sampling with emphasis on cost and risk aspects of both, variable sampling, attributes sampling, use of mil-stds 105 and 414, and sequential sampling. Course designed for those involved in quality and process control and related areas. (Prereq 0610C or §. Limited to 25 students)

Spring Sem Sec 1 W—6-9:00, MainE 54

IEOR 5000 INTRODUCTION TO INDUSTRIAL ENGINEERING ANALYSIS. 4 degree credits, \$60.

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 ap-

NEW

NEW

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industrial relations

proach 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 85.

Thomas J. Bergmann, Teaching Associate in Industrial Relations
Mario F. Bognanno, Associate Professor of Industrial Relations
James B. Dworkin, Teaching Associate in Industrial Relations
Alexander Farkash, Teaching Associate in Industrial Relations
Robert L. Fjerstad, Director, Employee Relations, Northern States Power Co.
John J. Flagler, Professor of Industrial Relations
Herbert G. Heneman, Jr., Professor of Industrial Relations
Frederick S. Hills, Teaching Associate in Industrial Relations
George Jacobs, Labor Arbitrator and Consultant
Elmer R. John, Elmer R. John Associates
Frank J. Krzystofiak, Teaching Associate in Industrial Relations
George T. Milkovich, Associate Professor of Industrial Relations
George O'Connell, Teaching Associate in Industrial Relations
Duane L. Peterson, Teaching Associate in Industrial Relations
David A. Pierson, Teaching Associate in Industrial Relations
Patrick R. Pinto, Assistant Professor of Industrial Relations
Clyde J. Scott, Teaching Associate in Industrial Relations
George Seltzer, Professor of Industrial Relations
Cyrus F. Smythe, Associate Professor of Industrial Relations
Robert T. Weaver, Teaching Associate in Industrial Relations
James T. Wrich, Accreditation and Survey Specialist, Hazelden Foundation

IR 0001C SUPERVISION I: ELEMENTS OF SUPERVISION. 3 certificate credits, \$42 plus \$2 special fee. **Total \$44.**

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 T—6:30-9:00, Kel HS 233, Krzystofiak (Limit 35 students*)

Fall Sem Sec 2 M—6:20-8:00, BlegH 245, Farkash

Winter Qtr Sec 3 T—7-9:30, Sand JHS 212, Hills (Limit 35 students*)

Spring Sem Sec 4 T—6:20-8:00, BlegH 450, Bergmann

Spring Qtr Sec 5 T—7-9:30, Rich HS 221, Weaver (Limit 30 students*)

Sec 6 Th—6:20-8:50, BlegH 245

IR 0002C SUPERVISION II: ADVANCED TECHNIQUES OF SUPERVISION. 3 certificate credits, \$42 plus \$2 course fee. **Total \$44.**

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

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industrial relations

organization and communications are among the topics discussed. Extensive use is made of discussion method and case studies. (Prereq 0001C or #)

Fall Sem Sec 1 T—6:20-8:00, BlegH 335, Pierson

Spring Qtr Sec 2 Th—6:20-8:50, BlegH 240, Fjerstad

IR 0007C OCCUPATIONAL SAFETY AND HEALTH. 3 certificate credits, \$42.

Designed to help develop understanding of the Occupational Safety and Health Act of 1970. For representatives of management, unions, nurses associations, government agencies, etc., who have interests or responsibilities in this area. Topics include the content of the Act, complaints and enforcement, administration and record keeping, safety and health standards, union and management views of the role of the safety committee, industrial hygiene, the roles of doctor, nurse and industrial clinic, the role of the states (Minnesota—a case study), the implication of the Act for Workman's Compensation. (No prereq)

Fall Qtr Sec 1 M—6:20-8:50, BlegH, 130, O'Connell

Spring Qtr Sec 2 M—7-9:30, BlegH 145

***IR 3000 GOVERNMENTAL MANPOWER POLICIES AND PROGRAMS.** 4 degree credits, \$56.

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. Limited to 30 students)

Fall Qtr Sec 1 Th—7-9:30, BlegH 340, Seltzer

***IR 3000 INDUSTRIAL CONTROL SYSTEMS FOR CHEMICALLY DEPENDENT EMPLOYEES.** 4 degree credits, \$56.

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. Limited to 36 students)

Fall Qtr Sec 2 T—6:20-8:50, BlegH 330, Wrich

***IR 3000 LABOR ARBITRATION.** 4 degree credits, \$56.

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. Limited to 40 students)

Fall Qtr Sec 3 T—7-9:30, BlegH 145, Jacobs

***IR 3000 COLLECTIVE BARGAINING: THE PUBLIC SECTOR.** 4 degree credits, \$56.

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. Limited to 30 students.)

Winter Qtr Sec 4 M—7-9:30, BlegH 110, Seltzer

IR 3000 ORGANIZED LABOR AND THE POLITICAL PROCESS 4 degree credits, \$56.

Complex social and economic issues: Labor's objectives and responses, the roles labor plays in the presidential and congressional elections; the politics of the wage-price freeze; labor and party alliances and their historic roots; the

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industrial relations

liberal-labor coalition and prospects for division or coalition; the labor vote—can it be delivered?? Labor's campaign apparatus and the issue of campaign spending; labor's legislative lobby; minority groups and urban labor politics; labor and the political parties in city and state and federal governments. (No prereq)

Winter Qtr Sec 5 T—7-9:30, BlegH 230

IR 3002 INDUSTRIAL RELATIONS SYSTEMS: LABOR MARKETS AND THE MANAGEMENT OF HUMAN RESOURCES. 4 degree credits, \$6002. \$56. ★

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. Semester courses meets concurrently with 8002)

Fall Qtr Sec 1 T—7-9:30, Rich HS 221, (Limit 30 students*)

Fall Sem Sec 2 W—6:20-8:00, BlegH 245, Heneman

Winter Qtr Sec 3 M—7-9:30, Mtka HS 119, Dworkin

Spring Sem Sec 4 W—6:20-8:00, BlegH 330, Bognanno

Spring Qtr Sec 5 M—7-9:30, Sand JHS 209, (Limit 35 students*)

IR 3007 COLLECTIVE BARGAINING NEGOTIATIONS AND MODERN LABOR RELATIONS. 4 degree credits, \$56.

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 Sem Sec 1 W—6:20-8:00, BlegH 335, Scott

Winter Qtr Sec 2 M—6-8:30, Sand JHS 209, Bognanno (Limit 35 students*)

Spring Sem Sec 3 W—6:20-8:00, BlegH 335, Peterson

Spring Qtr Sec 4 T—6:30-9:00, BlegH 335, Smythe

IR 3010 HUMAN RELATIONS AND APPLIED ORGANIZATION THEORY. 4 degree credits, \$56.

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 Educ 5305, page 158. (No prereq)

Fall Qtr Sec 1 T—6:20-8:50, BlegH 225, Pinto

Winter Qtr Sec 2 Th—7-9:30, Rich HS 221, Fjerstad (Limit 30 students*)

Spring Sem Sec 3 M—8:15-9:55, BlegH 230

Spring Qtr Sec 4 Th—6-8:30, Kel HS 233, Pinto (Limit 35 students*)

*IR 8000 GOVERNMENTAL MANPOWER POLICIES AND PROGRAMS. 4 degree credits, \$64.

See description for 3000. (No prereq. Meets concurrently with 3000. Limited to 30 students. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 Th—7-9:30, BlegH 340, Seltzer

*IR 8000 INDUSTRIAL CONTROL SYSTEMS FOR CHEMICALLY DEPENDENT EMPLOYEES. 4 degree credits, \$64.

See description for 3000. (No prereq. Meets concurrently with 3000. Limited to 36 students. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 2 T—6:20-8:50, BlegH 330, Wrich

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industrial relations—insurance

*IR 8000 LABOR ARBITRATION. 4 degree credits, \$64.

See description for 3000. (No prereq. Meets concurrently with 3000. Limited to 40 students. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 3 T—7-9:30, BlegH 145, Jacobs

*IR 8000 COLLECTIVE BARGAINING: THE PUBLIC SECTOR. 4 degree credits, \$64.

See description for 3000. (No prereq. Meets concurrently with 3000. Limited to 30 students. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 4 M—7-9:30, BlegH 110, Seltzer

IR 8002 INDUSTRIAL RELATIONS SYSTEMS: LABOR MARKETS AND THE MANAGEMENT OF HUMAN RESOURCES. 5 degree credits, \$3002. \$80.

See course description for IR 3002. (Prereq Econ 1001, Econ 1002, Psy 1001. Meets concurrently with 3002. Semester courses. Qualified students may register for graduate credit at the University of Minnesota)

Fall Sem Sec 1 W—6:20-8:00, BlegH 245, Heneman

Spring Sem Sec 2 W—6:20-8:00, BlegH 330, Bognanno

IR 8017 UNION GOVERNMENT AND POLICIES. 4 degree credits, \$64.

Internal administration and government of unions; collective bargaining policies of unions with regard to wages, hours, and other conditions of employment; the policies of the American labor movement in the economic, political and social life of the nation. (Prereq 8002 or 1. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 Th—6:20-8:50, BlegH 260, Flagler

insurance (Ins)

James Baratte, Regional Group Manager, Prudential Insurance Co.

David N. Barker, Director of Planning & Analysis, Prudential Insurance Co.

William Crolley, Registered Representative, Craig-Hallum, Inc.

Michael Flannigan, Legal Counsel, The Ministers Life & Casualty

Alfred R. W. Larkin, Executive Assistant-Control, North American Life & Casualty

Charles C. Nordhaus, Coordinator, CLU courses

Duane J. Rivard, Lecturer in Insurance

Orem O. Robbins, President, Security Life

Garry Rollins, Lecturer in Insurance

Dwain Sell, Associate Counsel, North American Life & Casualty

Andrew F. Whitman, Associate Professor of Insurance

Ins 3100 RISK MANAGEMENT AND INSURANCE. 4 degree credits, 56. ★

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. (No prereq)

Fall Sem Sec 1 M—8:15-9:55, BlegH 255, Whitman

Spring Sem Sec 2 M—8:15-9:55, BlegH 155, Whitman

Spring Qtr Sec 3 W—7-9:30, Sand JHS 213, Rollins (Limit 45 students*)

Ins 3200 LIFE AND HEALTH INSURANCE. 4 degree credits, \$8200. \$56. ★

Types of individual life and health insurance contracts, their uses, and their major provisions. Insurance and pension components of employee benefit

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insurance

N
E
W

plans—their characteristics and regulation. Programming and estate planning. Business uses of individual life and health insurance. Selection of a life and health insurer. (Prereq 3100 or equivalent)

Spring Sem Sec 1 **M**—8:15-9:55, Rollins

Property and Casualty Insurance Curriculum

The University of Minnesota cooperates with the Insurance Institute of America and the American Institute for Property and Liability Insurance Underwriters Inc., by offering an educational program that provides the basic courses needed by those who wish to take the examinations of either or both of the institutes. The Insurance Institute of America Ins 0021C, 0022C, 0023C courses are considered excellent preparation for the more difficult American Institute courses which lead to the Chartered Property and Casualty Underwriters (CPCU) designation. The Insurance Institute of America Adjustment courses are part of a professional education program for claims adjusters. The three Insurance Institute of America Risk Management courses are designed to develop professional competence in risk management. The management courses deal with general management concepts. Complete details of the program of training under both institutes are printed in the Institute's Annual announcements, copies of which may be obtained from Continuing Education and Extension. Direct all inquiries to Wallace Russell 929-5551.

IIA Ins.0021C, 0022C, 0023C. 3 certificate credits each term, \$42 each term.

Based on the IIA-Ins 21, 22, and 23, Topical Outlines of the Insurance Institute of America. Provides a background in property and liability insurance and serves as a preparatory course for the CPCU program. **Ins 0021C:** Economic and social influences of insurance; types of risk and kinds of insurance to meet them; legal principles important to property and liability insurance; historical development of insurance; rate making; types of insurers and their organization; underwriting and re-insurance; analysis of insurance contracts; regulation. **0022C:** An intensive study of fire and marine insurance contracts. **0023C:** An intensive study of casualty insurance contracts. (No prereq)

Fall Qtr 0021C Sec 1 **M**—5:30-8:00, BlegH 220, Whitman

Fall Qtr 0022C Sec 2 **M**—5:30-8:00, BlegH 110, Rivard

Sp Term 0023C Sec 3 **Jan. 13-Apr. 28** **M**—6:20-8:00, BA 735 Whitman

College of Life Underwriters Curriculum (CLU)

In cooperation with the Minneapolis and St. Paul chapters of the American College of Life Underwriters (CLU) Continuing Education and Extension is offering 0001C, 0002C, 0003C, 0004C, 0005C of the CLU educational programs.

clu college of life underwriters

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 920-3660 or writing to State Office of Life Underwriters, Suite 161, 4620 West 77th Street, Edina, Minnesota 55435, or from the chairman: (listed below).

Charles C. Nordhaus, 607 Marquette Ave., 338-0751

Enrollment must be completed in the Fall for two courses covering both Fall and Spring semester.

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insurance

Registration is made for consecutive courses (0001C and 0002C, 0003C and 0004C, 0005C and 0006C, 0007C and 0008C, 0009C and 0010C). The American College will not allow a candidate to sit for the examination for course 0010C unless he has completed all 10 courses.

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 0001C INDIVIDUAL LIFE AND HEALTH INSURANCE. 3 certificate credits, \$42.

This course is designed as preparation for the January CLU examination in course 0001C. The subject matter will cover such topics as needs and uses; types of contracts; introduction the health insurance; contract provisions; fundamentals of programming and settlement options. (No prereq)

Fall Sem Sec 1 **M**—4:40-6:40, 1750 Henn Ave So, Larkin

CLU 0002C LIFE INSURANCE LAW AND COMPANY OPERATIONS. 3 certificate credits, \$42.

This course is designed for preparation for the June CLU examination in course 0002C. The subject matter will cover such topics as the arithmetics of premiums and reserves; structures of the life insurance business; life insurance law and company operations. (No prereq)

Spring Sem Sec 1 **M**—4:40-6:40, 1750 Henn Ave So, Larkin

CLU 0003C SOCIAL INSURANCE AND GROUP INSURANCE. 3 certificate credits, \$42.

This course is designed for preparation for the January CLU examination in course 0003C. The subject matter will cover group life insurance; group health insurance; problems of old age and other social insurance needs. (No prereq)

Fall Sem Sec 1 **T**—4:30-6:30, 3701 Wayzata Blvd, Baratte

CLU 0004C PENSION PLANNING. 3 certificate credits, \$42.

This course is designed for preparation for the June CLU examination in course 0004C. The subject matter will cover the fundamentals of pension plans. (No prereq)

Spring Sem Sec 1 **T**—4:30-6:30, 1750 Henn Ave So, Sell

CLU 0005C INCOME TAXATION. 3 certificate credits, \$42.

This course is designed for preparation for the January CLU examination in course 0005C. The subject matter will cover income taxation and its relationship to life insurance and estate planning. (No prereq)

Fall Sem Sec 1 **W**—4:30-6:30, 3701 Wayzata Blvd, Flannigan

CLU 0006C INVESTMENTS AND FAMILY FINANCIAL MANAGEMENT. 3 certificate credits, \$42.

This course is designed for preparation for the June CLU examination in course 0006C. The subject matter will cover the fundamentals of investments and family financial management. (No prereq)

Spring Sem Sec 1 **W**—4:30-6:30, 3701 Wayzata Blvd, Crolley

CLU 0007C ACCOUNTING AND FINANCE. 3 certificate credits, \$42.

This course is designed for preparation for the January Clu examination in course 0007C. The subject matter will cover family and business finances and accounting. (No prereq)

Fall Sem Sec 1 **Th**—4:30-6:30, 3701 Wayzata Blvd, Barker

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

insurance-italian

CLU 0008C ECONOMICS. 3 certificate credits, \$42.

This course is designed for preparation for the June CLU examination in course 0008C. The subject matter will be devoted to the basic principles of economics. (Prereq 0007C)

Spring Sem Sec 1 **Th**—4:30-6:30, 3701 Wayzata Blvd, Barker

CLU 0009C BUSINESS INSURANCE. 3 certificate credits, \$42.

This course is designed for preparation for the January CLU examination in course 0009C. The subject matter will cover settlement options and programming and life insurance for business purposes. (No prereq)

Fall Sem Sec 1 **M**—4-6:00, 1200 So 2 Ave, Robbins

CLU 0010C ESTATE PLANNING AND TAXATION. 3 certificate credits, \$42.

This course is designed for preparation for the June CLU examination in course 0010C. The subject matter will deal with estate planning. (Prereq 0009C)

Spring Sem Sec 1 **M**—4-6:00, 1200 So 2 Ave, Robbins

institute of technology (IT)

(See also Engineering Fundamentals, IT 0001, page 194; and Transportation, page 321)

J. Edward Anderson, Professor of Mechanical Engineering

IT 3401 TRANSPORTATION. 4 degree credits, \$56. (♦ \$28)

Examination of urban-transportation problems, characteristics of solutions, criteria for effective solutions, and characteristics of systems which provide alternatives to the auto. Dial-a-ride, personal rapid transit, and dual-mode systems will be examined. Emphasis is on transportation as a contemporary social issue. (Prereq high school algebra)

Winter Qtr Sec 1 **W**—6:20-8:50, MechE 18, Anderson

italian (Ital)

Josephine Mangano, Lecturer in French and Italian

Arshi Pipa, Professor of French and Italian

Ital 5609 DANTE (IN ENGLISH). 5 degree credits, \$75. (♦ \$37.50)

Study of the *Divine Comedy* in English. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 61]. Qualified students may register for graduate credit except in the major field)

Fall Qtr Sec 1 **M**—6:20-9:00, FolH 406, Pipa

Italian for Graduate Students

The Italian language requirements for a graduate degree can be satisfied by successfully passing an examination given at the end of a one-quarter course (0001), specifically designed for students who desire only a reading knowledge of the language.

Ital 0001 ITALIAN FOR GRADUATE STUDENTS. No credit, \$42.

This course is designed solely to impart a basic reading knowledge of the Italian language. Successfully passing the examination fulfills the Graduate School requirements of reading knowledge of a foreign language. (No prereq)

Winter Qtr Sec 1 **M**—6:20-8:50, FolH 307, Mangano

Ital 0001 is usually offered as a Summer Extension Class.

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

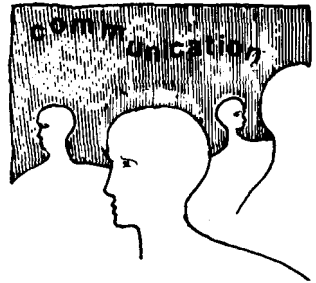
japanese

(See East Asian Languages)

jewish studies

(See Middle Eastern Languages)

journalism and mass communication (Jour)

*Walter H. Brovald, Associate Professor of Journalism**Roy E. Carter, Professor of Journalism**Everette Dennis, Instructor in Journalism**Irving Fang, Professor of Journalism**Gove P. Laybourn, Jr., Lecturer in Psychology**Lester L. Metz, Lecturer in Journalism**R. Smith Schuneman, Professor of Journalism**John C. Sim, Professor of Journalism**Willard L. Thompson, Professor of Journalism**Harold W. Wilson, Professor of Journalism***Jour 1001 INTRODUCTION TO MASS COMMUNICATIONS.** 2 degree credits, \$28.
(♦ \$14)★

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. (Prereq completion of freshman English)

Fall Qtr Sec 1 **M**—6:20-8:00, MurH 311, Brovald**Spring Qtr** Sec 2 **M**—6:20-8:00, MurH 311, Brovald**Jour 1005 VISUAL COMMUNICATION.** 3 degree credits, \$42. (♦ \$21)

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**—6:20-9:00, ForH 115, Schuneman

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

journalism

*Jour 1101 REPORTING. 5 degree credits, \$70. ★

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 1005 or grad status or §; type approx. 25 wpm and passing score in Minnesota English Test. Limited to 24 students)

Winter Qtr Sec 1 MTh—6:20-8:30, MurH 212, Fang

Jour 1201 PRINCIPLES OF ADVERTISING. 4 degree credits, \$56. (◆ \$28)

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 §)

Spring Qtr Sec 1 T—5:30-8:00, MurH 311, Thompson

Jour 1701 MASS COMMUNICATIONS LAW. 2 degree credits, \$28. (◆ \$14)

Origins and background of principles of press law. Libel and its defenses, penalties. Right of privacy, problems of fair trial. Law and self-regulation in advertising, in broadcast media. Copyright, obscenity statutes. (No prereq)

Winter Qtr Sec 1 T—6:20-8:00, MurH 311, Sim

Jour 3021 MASS COMMUNICATION AND THE NEWS. 4 degree credits, \$56. (◆ \$28)

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 W—6:20-9:00, MurH 311, Schuneman

*Jour 3221 GRAPHIC ARTS PROCESSES. 4 degree credits, \$56 plus \$5 course fee. Total \$61.

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)

Winter Qtr Sec 1 M—6:20-8:50, MurH 311, Metz

*Jour 3231 ADVERTISING GRAPHICS. 4 degree credits, \$56 plus \$5 course fee. Total \$61.

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 1201 or §. Limited to 20 students)

Fall Qtr Sec 1 M—6:20-8:50, MurH 315, Wilson

*Jour 5233 GRAPHIC DESIGN ANALYSIS. 4 degree credits. To be offered 1975-76.

Jour 5251 PSYCHOLOGY OF ADVERTISING. 4 degree credits, \$Psy 5751. \$60. (◆ \$30)

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)

Spring Sem Sec 1 Th—6:20-8:00, Jones 4, Laybourn

Jour 5353 PHOTOGRAPHIC COMMUNICATION. 4 degree credits, \$60.

Principles of photographic communication in the mass media. Multichannel communication theories; communicative overtones. Visual sources, layout, objectivity in editing. Experimental creative projects. (Prereq 1005 and course in or experience in journalistic or advertising writing. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 W—6:20-9:00, MurH 207, Schuneman

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

journalism—landscape architecture

Jour 5501 COMMUNICATION AND PUBLIC OPINION. 4 degree credits, \$60.

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)

Fall Qtr Sec 1 **Th**—6:20-8:50, MurH 308, Carter

Jour 5601 HISTORY OF JOURNALISM. 4 degree credits, \$60. (♦ \$30)

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. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **Th**—6:20-8:50, MurH 308, Dennis

Jour 5811 DEVELOPMENT OF AMERICAN BROADCASTING. 4 degree credits, \$60. (♦ \$30)

Historical and economic development of radio and television in the United States; government regulation, industry self-regulation, forms of social control; issues in contemporary broadcasting. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **Th**—6:20-8:50, MurH 311, Fang

laboratory medicine (LMed)

(See also Medicine; Phil 5770, Medical Ethics; and Public Health)

Seymour Handler, Clinical Assistant Professor, North Memorial Hospital

***LMed 5110 HOSPITAL INFECTIONS CONTROL.** 2 degree credits, \$30.

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. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **TTh**—4:15-5:00, HS UnitA 2-520, Handler

labor education

For information on non-credit conferences or workshops in labor education, please contact Martin Duffy, Labor Education Service, 451 Business Administration; telephone 373-4110. Or inquiries may be addressed to the above address at the University of Minnesota, Minneapolis, Minnesota 55455.

landscape architecture (LA)

(See also Architecture and Horticultural Science)

C. Gustaf Hard, Professor of Horticultural Science

LA 1024 THEORY OF LANDSCAPE DESIGN. 3 degree credits, \$42.

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

See symbols, page 33.

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latin—law

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, HortS 415, Hard

latin (Lat)

(Faculty listed under Classics, page 138)

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 61): Clas 1008, 1019, 1045, 5005, 5008, 5145; Hist 1053, 3053; Phil 3001, 3002.

Lat 1101-1102-1103 LATIN. 5 degree credits each quarter, \$70 plus \$3 course fee. Total \$73 each quarter. ★

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, FoIH 202, Sonkowsky

1102 Sec 2 W—6:30-7:30, FoIH 202, Sonkowsky

1103 Sec 3 W—6:30-7:30, FoIH 202, Sonkowsky

Winter Qtr 1101 Sec 4 W—6:30-7:30, FoIH 202, Sonkowsky

1102 Sec 5 W—6:30-7:30, FoIH 202, Sonkowsky

1103 Sec 6 W—6:30-7:30, FoIH 202, Sonkowsky

Spring Qtr 1101 Sec 7 W—6:30-7:30, FoIH 202, Sonkowsky

1102 Sec 8 W—6:30-7:30, FoIH 202, Sonkowsky

1103 Sec 9 W—6:30-7:30, FoIH 202, Sonkowsky

law

For information on non-credit conferences or workshops in law, please contact John Wirt, Continuing Legal Education, 338 Nolte Center; telephone 373-5386.

law—common legal problems

(See Business Law)

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

library science (Lib)

David Berninghausen, Professor of Library Science
Joan Leigh, Assistant Professor of Library Science
Suzanne Mahmoodi, Lecturer in 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.

***Lib 5101 INTRODUCTION TO LIBRARIES AND LIBRARIANSHIP.** 5 degree credits, \$75.

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. Limited to 10 students. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **TTh**—4:30-6:30, Ph 145, Berninghausen

Lib 5102 MEDIA CENTER ADMINISTRATION. 3 degree credits, \$45.

Organization and administration at the school building level of the library as the single agency that encompasses all forms of instructional materials; philosophy and objectives of service; administration and organization plans, procedures, and relationships. (Prereq 5101, 5221, 5401. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **TTh**—4:30-5:45, Ph 145

Lib 5204 PRINT MATERIALS IN LIBRARIES. 3 degree credits, \$45.

Selection, evaluation, and use of books, periodicals, and other printed sources of information and recreation for youth in school and public libraries; reading patterns of children and adolescents, and implications for selection of printed materials to meet the requirements, purposes, and abilities of different age groups. (Prereq 5101, 5221, 5401. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **MW**—4:30-5:45, WaLib 339

***Lib 5221 RECORDS OF KNOWLEDGE.** 4 degree credits, \$60.

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. 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, Ph 145, Leigh

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

library science—management

*Lib 5401 ORGANIZATION OF INFORMATION I. 4 degree credits, \$60.

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. Limited to 10 students. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 MW—4:30-6:30, Ph 145, Mahmoodi

linguistics (Ling)

Kathleen Houlihan, Assistant Professor of Linguistics

Rocky V. Miranda, Assistant Professor of Linguistics

Betty W. Robinett, Professor of Linguistics

Ling 1001 THE NATURE OF HUMAN LANGUAGE. 3 degree credits, \$42. (♦ \$21)

A general survey of basic facts and theories concerning human language, and their relevance to the study of human behavior. (No prereq)

Fall Qtr Sec 1 T—6:20-8:50, FolH 103, Miranda

Ling 3001 INTRODUCTION TO LINGUISTICS. 4 degree credits, \$5001. \$56. (♦ \$28)

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)

Spring Qtr Sec 1 M—6:20-8:50, FolH 108, Houlihan

Ling 5001 INTRODUCTION TO LINGUISTICS. 4 degree credits, \$3001. \$60.

See course description for 3001. (No prereq. Meets concurrently with 3001. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 M—6:20-8:50, FolH 108, Houlihan

Ling 5721 LINGUISTICS: ENGLISH AS A SECOND LANGUAGE. 3 degree credits, \$45.

Application of linguistics to materials, methods, and practicum. Principles of selection, sequencing, and presentation of instructional materials at various grade levels. (Prereq 3001 or 5001, and 1. Meets concurrently with SeEd 5396. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 T—6:20-8:50, Bu 120, Robinett

management (Mgmt)

Philip Anderson, Instructor in Management

W. Bruce Erickson, Associate Professor of Management

J. Stephen Heinen, Assistant Professor of Management

Andrew Hoh, Instructor in Management

Gary Lorenz, Instructor in Management

Frederick Miner, Instructor in Management

Precha Thavikulwat, Instructor in Management

Albert K. Wickesberg, Professor of Management

Raymond E. Willis, Associate Professor of Management Science

Bruce D. Wonder, Assistant Professor of Management

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

***Mgmt 3001 FUNDAMENTALS OF MANAGEMENT.** 4 degree credits, \$56.

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 structure and behavior; leadership. (No prereq. Credits may be applied toward the Information Systems Analysis and Design certificate [see page 85]. Limited to 40 students).

- Fall Qtr** Sec 1 **M**—5:30-8:00, BlegH 255, Anderson
 Sec 2 **T**—7-9:30, Sand JHS 213, Wickesberg (Limit 40 students*)
 Sec 3 **W**—5:30-8:00, BlegH 125, Lorenz
- Fall Sem** Sec 4 **W**—6:20-8:00, BlegH 110, Hoh
 Sec 5 **W**—8:15-9:55, BlegH 105, Hoh
 Sec 6 **Th**—6:20-8:00, BlegH 150, Wonder
 Sec 7 **Th**—8:15-9:55, BlegH 150, Wonder
- Winter Qtr** Sec 8 **W**—5:30-8:00, BlegH 215
 Sec 9 **W**—7-9:30, Kel HS 168-170, Willis (Limit 40 students*)
 Sec 10 **Th**—5:30-8:00, BlegH 335, Lorenz
 Sec 11 **S**—9 a.m.-11:30, BlegH 415, Hoh
- Spring Sem** Sec 12 **T**—6:20-8:00, BlegH 155, Wonder
 Sec 13 **T**—8:15-9:55, BlegH 155, Wonder
- Spring Qtr** Sec 14 **W**—5:30-8:00, BlegH 155
 Sec 15 **W**—5:30-8:00, Rich HS 249-250, Miner (Limit 40 students*)
 Sec 16 **Th**—5:30-8:00, BlegH 110, Anderson

***Mgmt 3002 PSYCHOLOGY IN MANAGEMENT.** 4 degree credits, \$56.

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. Limited to 36 students)

- Fall Sem** Sec 1 **W**—6:20-8:00, BlegH 115, Heinen
 Sec 2 **W**—8:15-9:55, BlegH 115, Heinen
- Spring Sem** Sec 3 **W**—6:20-8:00, BlegH 115, Heinen
 Sec 4 **W**—8:15-9:55, BlegH 115, Heinen
- Spring Qtr** Sec 5 **Th**—7-9:30, Kel HS 168-170, Thavikulwat

***Mgmt 3004 BUSINESS POLICY: STRATEGY FORMULATION AND IMPLEMENTATION.** 5 degree credits, \$70.

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. Limited to 35 students)

- Fall Sem** Sec 1 **T**—6:20-8:00, BlegH 340, Anderson
Spring Sem Sec 2 **T**—6:20-8:00, BlegH 340, Anderson

***Mgmt 3005 GOVERNMENT AND BUSINESS.** 4 degree credits, \$56.

The role of the free enterprise system; the structure of American industry; the economic and social consequences of big business; public policies toward private enterprise; public regulation, public ownership; the anti-trust laws and their applications. (Prereq Econ 1001 and 1002 or equiv. Limited to 45 students) **N E W**

- Winter Qtr** Sec 1 **T**—5:30-8:00, BlegH 225, Erickson

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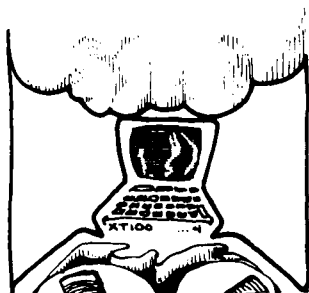
management—management information systems

*Mgmt 5175 **BUSINESS FORECASTING.** 4 degree credits, \$60.

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 \pm . Limited to 40 students. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 W—5:30-8:00, BlegH 425, Willis

management information systems (MIS)



Robert J. Ahlstrom, Manager, Data Processing, Red Owl, Inc.

John Anderson, Assistant Professor of Management Information Systems

Robert P. Bostrom, Instructor in Management Information Systems

John Braasch, Assistant to Chairman, Donaldson Co., Inc.

John Carlis, Instructor in Management Information Systems

Gordon B. Davis, Professor of Management Information Systems

Gary W. Dickson, Professor of Management Information Systems

Gordon C. Everest, Assistant Professor of Management Information Systems

Thomas R. Hoffmann, Professor of Management Information Systems

Milton Jenkins, Instructor in Management Information Systems

Lynn Jensen, Instructor in Management Information Systems

Lois Moe, Senior Planning Analyst, First Computer Corp.

David Naumann, Instructor in Management Information Systems

Roger Schroeder, Associate Professor of Management Information Systems

Michael Timmons, Jr., Product Support Manager, Control Data Corp.

Ronald D. Visness, Lecturer in Management Information Systems

Ronald Weber, Instructor in Management Information Systems

MIS 3098 ELEMENTARY COBOL. 1 degree credit plus 1 certificate credit, \$28 plus \$10 special fee. **Total \$38.**

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. A programming laboratory is provided. (No prereq)

Fall Qtr Sec 1 **Time arr.** (see sectioning statement below)

Winter Qtr Sec 2 **Time arr.** (see sectioning statement below)

Spring Qtr Sec 3 **Time arr.** (see sectioning statement below)

See symbols, page 33.

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management information systems

MIS 3099 ELEMENTARY FORTRAN. 1 degree credit plus 1 certificate credit, \$28 plus \$10 special fee. **Total \$38.**

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. A programming laboratory is provided. (No prereq)

Fall Qtr Sec 1 **Time arr.** (see sectioning statement below)

Winter Qtr Sec 2 **Time arr.** (see sectioning statement below)

Spring Qtr Sec 3 **Time arr.** (see sectioning statement below)

MIS 5098 INTERMEDIATE COBOL. 1 degree credit plus 1 certificate credit, \$30 plus \$10 special fee. **Total \$40.**

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. A programming laboratory is provided. (Prereq MIS 3098. Qualified students may register for graduate credit at the University of Minnesota.)

Fall Qtr Sec 1 **Time arr.** (see sectioning statement below)

Winter Qtr Sec 2 **Time arr.** (see sectioning statement below)

Spring Qtr Sec 3 **Time arr.** (see sectioning statement below)

Sectioning for the MIS Programming Courses

Since these courses are self-paced, no formal lectures or sections are necessary. The student should select a preferred evening at registration and attend the first class meeting. Attendance after the first meeting is optional. The programming laboratory will be provided to aid the students on the following schedule: Fall, winter and spring quarters—M, T, W, Th,—6:00-10:00, BlegH 5.

***MIS 5100 COMPUTERS AND SYSTEMS DESIGN.** 4 degree credits, \$60.

Basic elements of computer hardware, software, and systems. Focus on the computer as a tool: hardware components and their function, operating systems, how a computer works, instructing a computer, the role and nature of programming languages, acquiring computer services, new developments in computer systems, selected uses of the computer, the many facets of the computer industry, standards, systems analysis and documentation, data communications. (Prereq MIS 3098 or 3099 or MIS 3098 or 3099 or 1. 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 435, Carlis**

Sec 2 **W—6-9:20, BlegH 415, Jensen**

Sec 3 **W—6-9:20, Rich HS 341, Naumann**

Winter Qtr Sec 4 **M—6-9:20, BlegH 210, Carlis**

Sec 5 **W—6-9:20, BlegH 435, Jensen**

Spring Qtr Sec 6 **M—6-9:20, BlegH 435, Carlis**

Sec 7 **W—6-9:20, BlegH 435, Jensen**

***MIS 5101 INTRODUCTION TO MANAGEMENT INFORMATION SYSTEMS.** 4 degree credits, \$60.

An overview of the field of management information systems. Topics include: the relationship of information, management and systems; what the manager should know about the computer; information systems for operational, tactical, and strategic decision making; administration and control of MIS development; and behavioral aspects of information systems. (No prereq. Limited to 50 students. Qualified students may register for graduate credit at the University of Minnesota)

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

management information systems

- Fall Qtr** Sec 1 T—6-9:20, BlegH 220, Schroeder
Sec 2 Th—6-9:20, BlegH 415, Jenkins
Winter Qtr Sec 3 T—6-9:20, BlegH 220, Moe
Spring Qtr Sec 4 T—6-9:20, BlegH 435, Moe

***MIS 5102 INTRODUCTION TO SYSTEMS ANALYSIS.** 4 degree credits, \$60.

Information requirements analysis, design constraints, functional analysis, systems prototypes, design justification. Management systems concepts for integrating a computer system into the organization. Development of standards for systems work, and project planning and control. (Prereq MIS 5100 and MIS 5101 or *. 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 110, Naumann
Winter Qtr Sec 2 T—6-9:20, BlegH 110, Jenkins
Spring Qtr Sec 3 T—6-9:20, BlegH 110, Jenkins

***MIS 5103 DATA STRUCTURES AND FILE PROCESSING.** 4 degree credits, \$60 plus \$4 special fee. **Total \$64.**

Sequential file processing, sorting techniques direct access techniques such as indexed sequential and random. File systems and file support systems. Introduction to the concepts of data management storage structures: lists, multilists, trees, rings, inverted files. (Prereq MIS 5100 and MIS 5098, or MIS 5100 and MIS 5098. 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 145, Weber
Winter Qtr Sec 2 Th—6-9:20, BlegH 145, Weber
Spring Qtr Sec 3 Th—6-9:20, BlegH 145, Weber

Students with programming experience or other data processing experience may apply for a waiver of prerequisites for MIS 5102 or MIS 5103. Students who believe they are eligible for a waiver of prerequisites should contact Extension Counseling.

Special Program of Continuing Education in Management Information Systems

The following courses are taught in a special program of continuing education in Management Information Systems (MIS). This sequence of courses is offered only through Continuing Education and Extension. These courses apply toward the requirements for the Certificate in Information Systems Analysis and Design (see page 85). This program was established by the University of Minnesota in cooperation with the Minnesota business community to fill a recognized need for continuing education in computer data processing and MIS. The goal of this sequence is to provide the student with the skills necessary to analyze, design, implement, and control computer-based management information systems.

MIS 0124C INFORMATION SYSTEMS ANALYSIS. 4 certificate credits, \$56.

Organizational analysis, information systems architecture, decision analysis. Principles of systems and subsystems structures and boundaries. Structured programming and its implications for MIS. Tools for systems analysis and design. New developments in systems, hardware and software, their role in the future of MIS. (Prereq MIS 5102 and MIS 5103)

- Winter Qtr** Sec 1 W—6-9:20, BlegH 415, Visness
Spring Qtr Sec 2 W—6-9:20, BlegH 215, Visness

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

management information systems—marketing

MIS 0131C DATABASE MANAGEMENT SYSTEMS. 4 certificate credits, \$56 plus \$10 special fee. **Total \$66.**

Concepts and methods in the definition, creation, and management of databases for management information systems. Topics include: objectives of database management, design and evaluation of database management systems, theory of files data structures, storage structures, interrogation, responsibilities of the database administrator, database integrity, security, and privacy. (Prereq MIS 5103)

Winter Qtr Sec 1 **W**—6-9:20, BlegH 250, Bostrom

MIS 0132C DATA COMMUNICATIONS SYSTEMS. 4 certificate credits, \$56.

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 MIS 5102 or equivalent)

Fall Qtr Sec 1 **Th**—6-9:20, BlegH 235, Timmons

Spring Qtr Sec 2 **Th**—6-9:20, BlegH 235, Timmons

MIS 0140C MATHEMATICAL FOUNDATIONS OF SYSTEMS ANALYSIS I. 3 certificate credits, \$42.

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 150, Ahlstrom

Winter Qtr Sec 2 **M**—6-8:30, BlegH 215, Ahlstrom

Spring Qtr Sec 3 **M**—6-8:30, BlegH 150, Ahlstrom

MIS 0151C ADMINISTRATION AND CONTROL OF MANAGEMENT INFORMATION SYSTEMS. 4 certificate credits, \$56.

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 MIS 5102 and Mgmt 3001)

Fall Qtr Sec 1 **Th**—6-9:20, BlegH 230, Braasch

Winter Qtr Sec 2 **Th**—6-9:20, BlegH 230, Braasch

marketing (Mktg)

Your attention is called to the Credit and Financial Management Certificate program, page 84.

Stanley R. Cowle, Administrator, Hennepin County

Michael Dwyer, Marketing Research Director, Sperry Division, General Mills, Inc.

Robert J. Holloway, Professor of Marketing

Michael J. Komar, Western Division Sales Manager, Thermo-King Corp.

Richard L. Peterson, Management Consultant, Cooperative Management Resources

Ivan Ross, Professor of Business Administration

Bertram W. Russick, President, Mid-Continent Surveys, Inc.

Richard Sauter, Marketing Research and Planning, Medtronic, Inc.

Orville Walker, Associate Professor of Marketing

Thomas Walker, Credit Counselor, Farm-Oyl Co.

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

marketing

Mktg 0087C CREDITS AND COLLECTIONS. 3 certificate credits, \$42.

Nature and types of credit instruments and agencies; qualifications and work of credit manager; valuation and use of financial statements and credit reports; collection methods and correspondence; bankruptcy and adjustments; credit limit and control. (Prereq 3000)

Fall Qtr Sec 1 **Th**—6:20-8:50, BlegH 135, T Walker

***Mktg 3000 PRINCIPLES OF MARKETING.** 4 degree credits, \$56.

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 1001 and 1002 or ϵ . Limited to 50 students.)

Fall Qtr Sec 1 **M**—7-9:30, Rich HS 249-250, Dwyer

Sec 2 **Th**—6-8:30, BlegH 255, Sauter

Fall Sem Sec 3 **T**—6:20-8:00, BlegH 105

Sec 4 **T**—8:15-9:55, BlegH 105, Holloway

Winter Qtr Sec 5 **M**—6-8:30, BlegH 260, Komar

Sec 6 **W**—6-8:30, AndH 250

Sec 7 **Th**—7-9:30, Sand JHS 213, Sauter (Limit 45 students*)

Spring Sem Sec 8 **T**—6:20-8:00, AndH 250, Holloway

Spring Qtr Sec 9 **M**—7-9:30, Mtka HS 119, Dwyer

Mktg 3060 MARKETING SYSTEMS. 4 degree credits, \$56.

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 ϵ)

Winter Qtr Sec 1 **Th**—5:30-8:00, BlegH 240, O Walker

Mktg 3075 SALES MANAGEMENT. 4 degree credits, \$56.

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)

Spring Sem Sec 1 **M**—6:20-8:00, BlegH 10, Peterson

***Mktg 3077 ADVERTISING AND SALES PROMOTION.** 4 degree credits, \$56.

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 socio-economic considerations. (Prereq 3000. Limited to 25 students)

Spring Qtr Sec 1 **W**—5:30-8:00, BlegH 120, Ross

Mktg 3080 INDUSTRIAL AND GOVERNMENTAL PROCUREMENT. 4 degree credits, \$56.

Procurement of supplies, equipment and complete systems of industrial firms and governmental agencies. Study of quantity and quality decisions, forward buying, 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)

Spring Sem Sec 1 **M**—6:20-8:00, BlegH 250, Cowle

See symbols, page 33.

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Mktg 3095 MARKETING RESEARCH. 4 degree credits, \$56.

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 $\$$).

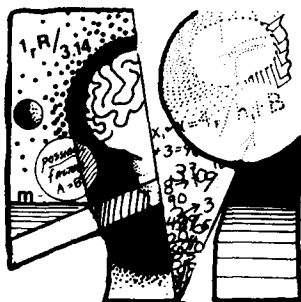
Fall Qtr Sec 1 **M**—5:30-8:00, BlegH 210, Russick

Mktg 3098 INTRODUCTION TO CONSUMER BEHAVIOR. 4 degree credits, \$56. ★

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)

Spring Qtr Sec 1 **T**—6:20-8:50, BlegH 210, O Walker

mathematics (Math)



Your attention is called to the Mathematics and Science Certificate Program, page 79, and the Undergraduate Development Certificates in Engineering and Sciences, page 90.

- David K. Cohoon, Assistant Professor of Mathematics*
- Lawrence R. Harper, Assistant Professor of Mathematics*
- Walter James, Information Systems Manager, State of Minnesota*
- Howard Jenkins, Associate Professor of Mathematics*
- Harvey B. Keynes, Associate Professor of Mathematics*
- Chester L. Miracle, Associate Professor of Mathematics*
- Wayne W. Schmaedeke, Associate Professor of Mathematics, St. Olaf College*
- George Sell, Professor of Mathematics*
- Gaylord P. Schwartz, Assistant Professor of Mathematics, St. Thomas College*
- William Serbyn, Instructor in Mathematics*
- James G. Swenson, Instructor, Anoka Senior High*
- James E. Thompson, Associate Professor of Mathematics*
- V. Varadachari, Assistant Professor of Mathematics, Wisconsin State University at River Falls*
- John L. Vitelli, Manager, Field Operating Systems, Commercial Division, Honeywell*

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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 (replaces 1210). However, if it has been more than two years since he completed his last mathematics course in high school, the student should register in Math 1201, or possibly Math 0009 (higher algebra). The following rule usually applies: A student who has been out of high school five years or more, or 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). Math 0009 and Math 1201 take the place of the junior and senior mathematics courses in high school.

The entrance requirement for the Institute of Technology is four years of high school mathematics, including solid geometry and trigonometry or Math 1201.

Every effort is being made to offer a variety of upper division courses in mathematics in Extension Classes. A limited number of courses at the 5XXX level are offered each year, pending sufficient enrollment in each course.

mathematics for nonmajors and prebusiness students

Math 1131 and Math 1142 are offered for the benefit of prebusiness students and are designed in cooperation with the College of Business Administration. Math 1141 is the same as 1111. These courses are also taken by CLA non-mathematics majors who do not need a full four-quarter calculus course. However, if it has been more than three years since students have completed their last mathematics course in high school, they should register for Math 0009.

calculus refresher course

This course 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.

new calculus sequence

The mathematics department has replaced the Analysis Sequence 1210, 1220, 1230, 1240, 1250, 1260 with a new Analysis Sequence 1201, 1211, 1221, 1231, 3211. When a student finishes 3211 he may take 3221 or 3066 and 3142.

Math 0005 ARITHMETIC FOR ADULTS. No credit, \$42.

A practical course for anyone needing a 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. It also includes an introduction to elementary algebra, linear equations and some other topics. It includes the measurement of length, area, and volume. This course is a good refresher for those who have forgotten some things such as the arithmetic of fractions or long division. It is a good course for shop men in industry who need to be able to work with fractions and measurement. It is a good course for those who have a poor background in arithmetic and algebra or those who dropped out of high school and now need to know arithmetic. Some exercises will be done in class. Students who do not wish to take any tests or earn a grade should audit the course. Students may register for S-N grade (satisfactory-no credit) or register for A-N grade (see Grades, page 30). (No prereq)

Fall Sem Sec 1 Th—6-8:30, Arch 5

Spring Sem Sec 2 M—6-8:30, Arch 5

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Math 0006 ELEMENTARY ALGEBRA. Entrance Credit, \$84.

This course begins at the very 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**—6:20-8:00, VH 203

Sec 2 **TTh**—6:7:40, VH 211

Spring Sem Sec 3 **MW**—6:20-8:00, VH 1

Math 0007 PLANE GEOMETRY. Entrance credit, \$84.

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**—6:20-8:00, Aero 215

Math 0008 SOLID GEOMETRY. Entrance credit, \$42.

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**—6:20-8:00, Aero 215

Math 0009 INTERMEDIATE ALGEBRA. Entrance credit, \$70.

Fundamental operations, 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 high school elementary and higher algebra, 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 **TTh**—6:30-8:35, Sand JHS 205 (Limit 35 students*)

Sec 2 **MW**—5:15-7:20, Arch 50

Sec 3 **MW**—6:30-8:35, Kel HS 237 (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 **TTh**—6-8:05, VH 20

Spring Sem Sec 7 **MW**—6-7:25, VH 2

Sec 8 **TTh**—6:20-7:45, Arch 35

Spring Qtr Sec 9 **MW**—6:30-8:35, Rich HS 221 (Limit 30 students*)

Math 1005 FOUNDATIONS OF ARITHMETIC. 3 degree credits, \$42.

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 $\$$.)

Fall Qtr Sec 1 **W**—6:30-9:00, Arch 35

Math 1006 FOUNDATIONS OF ARITHMETIC. 3 degree credits, \$42.

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)

Winter Qtr Sec 1 **W**—6:30-9:00, Arch 50

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mathematics

Math 1008 TRIGONOMETRY. 3 degree credits, \$1201. \$42.

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**—5:20-7:00, MainE 303

Sec 2 **T**—8:15-9:55, VH 203

Sec 3 **W**—6:20-8:00, Arch 5

Spring Sem Sec 4 **T**—6:20-8:00, Arch 5

Math 1111 COLLEGE ALGEBRA AND ANALYTIC GEOMETRY. 5 degree credits, \$1141, 1411, 1441, 1201. \$70.

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 requiring only some analytic geometry and college algebra without trigonometry, or whose background does not include logarithms. 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**—5:45-7:10, SciCB 125

Sec 2 **MW**—6:30-7:55, Sand JHS 210

Sec 3 **TTh**—6:20-7:45, VH 16

Sec 4 **S**—9-11:50 a.m., VH 16

Spring Sem Sec 5 **MW**—6:20-7:45, VH 209

Sec 6 **TTh**—6-7:25, VH 209

Math 1131 FINITE MATHEMATICS. 5 degree credits, \$1111, 1141, 1201, 1411. \$70.

(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, Kolth S134

Math 1142 INTRODUCTION TO CALCULUS OF ONE AND SEVERAL VARIABLES. 5 degree credits, \$1211, 1220, 1442. \$70.

(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 Math 1131 or 1141).

Fall Sem Sec 1 **MW**—6:20-7:45, VH 16

Spring Sem Sec 2 **MW**—5:45-7:10, VH 16

Sec 3 **MW**—6:30-7:55, Sand JHS 210 (Limit 35 students*)

Sec 4 **TTh**—6:20-7:45, VH 16

Sec 5 **S**—9-11:50 a.m., VH 16

Math 1201 PRE-CALCULUS. 5 degree credits, \$1141, 1411, 1441. \$70. ★

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, VH 20

Sec 2 **MW**—6:30-8:35, Rich HS 210 (Limit 30 students*)

Sec 3 **TTh**—6:30-8:35, Kel HS 237 (Limit 30 students*)

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mathematics

- Fall Sem** Sec 4 **TTh**—6-7:25, VH 206
Winter Qtr Sec 5 **TTh**—7-9:05, Sand JHS 205 (Limit 35 students*)
Spring Sem Sec 6 **MW**—6:20-7:45, VH 206
Spring Qtr Sec 7 **TTh**—6-8:05, VH 20

Math 1211 ANALYSIS I. 5 degree credits, \$1142, 1210, 1421, 1311. \$70. ★

Analytical geometry and calculus of functions of one variable, applications. (Prereq 0012C or 1201, or 0009 and 1008, or 4 years of high school mathematics including trigonometry within the last two years. See note page 256)

- Fall Qtr** Sec 1 **TTh**—6:30-8:35, Rich HS 210 (Limit 30 students*)
Fall Sem Sec 2 **MW**—6:20-7:45, VH 209
 Sec 3 **TTh**—5:45-7:10, MainE 320
Winter Qtr Sec 4 **MW**—6-8:05, VH 20
 Sec 5 **MW**—6:30-8:35, Rich HS 210 (Limit 30 students*)
 Sec 6 **TTh**—6:30-8:35, Kel HS 237 (Limit 30 students*)
Spring Sem Sec 7 **TTh**—6-7:25, VH 211
Spring Qtr Sec 8 **TTh**—7-9:05, Sand JHS 205 (Limit 35 students*)

Math 1221 ANALYSIS II. 5 degree credits, \$1220, 1321, 1431. \$70. ★

A continuation of the course described under 1211. (Prereq 1211 or 1210)

- Fall Qtr** Sec 1 **TTh**—6-8:05, VH 314
Fall Sem Sec 2 **MW**—6-7:25, VH 206
Winter Qtr Sec 3 **TTh**—6:30-8:35, Rich HS 210 (Limit 30 students*)
Spring Sem Sec 4 **TTh**—6:20-7:45, VH 206
Spring Qtr Sec 5 **MW**—6-8:05, VH 20
 Sec 6 **MW**—6:30-8:35, Rich HS 210 (Limit 30 students*)
 Sec 7 **TTh**—6:30-8:35, Kel HS 237

Math 1231 ANALYSIS III. 5 degree credits, \$1230, 1331. \$70. ★

A continuation of the course described under 1211. (Prereq 1221 or 1220)

- Fall Qtr** Sec 1 **MW**—6-8:05, VH 211
 Sec 2 **TTh**—6:30-8:35, Rich HS 207 (Limit 30 students*)
Winter Qtr Sec 3 **MW**—6-8:05, VH 311
Spring Qtr Sec 4 **TTh**—6:30-8:35, RichHS 207 (limited to 30 students*)

Math 1311-1321 COMPUTER CALCULUS. 5 degree credits each semester, \$1211, 1142; 1221. \$70 each semester.

Content and description is essentially the same as 1211-1221-1231 and 1611-1621 plus topics in elementary computer programming. Most of the material is presented from a computing point of view. (Prereq grade of C or better in 1201 or high school higher algebra, trigonometry, geometry and mathematics placement score for 1311; 1311 for 1321)

- Fall Sem 1311** Sec 1 **TTh**—6:20-7:45, VH 6
Spring Sem 1321 Sec 2 **TTh**—6:20-7:45, VH 6

Math 3061 OPERATIONAL METHODS FOR LINEAR SYSTEMS. 4 degree credits. \$56.

(Primarily for EE students). Review of Fourier series and their applications to linear ordinary differential equations. The Fourier transform, mathematical properties, amplitude and phase spectra, energy. The Laplace transform, mathematical properties and elementary inversion techniques, applications to systems of ordinary differential equation, transfer function of a filter, time and frequency domain relations. (Prereq 3221)

- Fall Sem** Sec 1 **Th**—6-8:15, MechE 102

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mathematics

Math 3091 ELEMENTARY PROBABILITY AND STATISTICS WITH APPLICATIONS. 4 degree credits, \$56.

Elementary probability and probability distributions, sampling and elements of statistical inference. (Prereq differential and integral calculus).

Fall Sem Sec 1 **Th**—6-8:15, VH 207

Math 3211 ANALYSIS IV. 5 degree credits, \$1240, 1444, 3411, 3521, 3611. \$70. ★

Partial differentiation, chain rule, implicit functions, applications. Multiple integrals in two and three dimensions. (Prereq 1231 or 1230 or 1444).

Fall Qtr Sec 1 **TTh**—6-8:05, VH 20

Winter Qtr Sec 2 **MW**—6-8:05, VH 211

Spring Qtr Sec 3 **MW**—6-8:05, VH 311

Math 3221 INTRODUCTION TO LINEAR ALGEBRA AND LINEAR DIFFERENTIAL EQUATIONS. 5 degree credits, \$1250, 3142, 3511. \$70. ★

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. (Prereq 1231 or 1230 or 1444).

Fall Qtr Sec 1 **TTh**—6-8:05, VH 209

Spring Qtr Sec 2 **MW**—6-8:05, VH 211

Math 3231 VECTOR ANALYSIS. 4 degree credits, \$1260, 5601-5602. \$56.

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 364

Spring Qtr Sec 2 **TTh**—6-7:40, VH 209

Math 5005-5006 TOPICS IN THE MATHEMATICS OF PRIMARY SCHOOLS. 4 degree credits each quarter, \$60 each quarter.

Provides a broad survey of mathematical topics for primary teachers who are interested in mathematics. The equivalent of one hour of class per week will be made up by extra homework and problem sessions. Available for credit only for students in elementary education program. (Prereq 1005 or 1006 with grades of B or better, or 3 for 5005; 5005 for 5006. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr 5005 Sec 1 **Th**—6:30-9:00, VH 301

Winter Qtr 5006 Sec 2 **Th**—6:30-9:00, VH 301

Math 5090 CALCULUS REFRESHER. 5 degree credits, \$75.

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 the engineering exams, for high school mathematics teachers, and for Education Masters' candidates with a major in math education or math. This course will cover the topics of a standard calculus course; differentiation of algebraic and trigonometric functions, differentials, the definite integral, analytic geometry, logarithmic and exponential functions, hyperbolic functions, techniques of integration, applications of integration, polar coordinates, infinite series, approximation, partial differentiation, and multiple integrals. (Prereq 3 or 4 quarters of calculus. May not be taken for graduate credit.)

Fall Sem Sec 1 **MW**—6:20-7:45, Arch 10

Math 5209 THEORY OF NUMBERS. 4 degree credits, \$60.

Elementary properties of integers; prime and composite numbers; Euclid's algorithm; congruences; theorems of Fermat and Wilson; primitive roots;

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mathematics—mechanical engineering

indices; Diophantine equations. (Prereq 3211. Qualified students may register for graduate credit at the University of Minnesota).

Fall Sem Sec 1 **S**—9:30 a.m.-12:00, VH 207

Math 5242-5243 MATRIX THEORY WITH APPLICATIONS. 4 degree credits each quarter, \$5211, 5283-5284. \$60 each quarter.

Systems of linear equations, finite dimensional linear spaces, bases, linear transformations, matrices, determinants, eigenvalues, reduction to canonical forms, quadratic and bilinear forms, applications. The equivalent of one credit hour per week will be made up by extra homework and problem sessions. (Prereq 3221 or 3142. Qualified students interested in graduate credit should inquire at the time of registration)

Fall Qtr 5242 Sec 1 **W**—6-8:30, VH 207

Winter Qtr 5243 Sec 2 **W**—6-8:30, VH 207

Math 5457 METHODS OF APPLIED MATHEMATICS. 4 degree credits. \$60.

Integrated study of analytic tools used in applications of Mathematics; emphasis on technique. Real and complex variables, matrices, ordinary and partial differential equations, calculus of variations, asymptotic expansions, etc. The equivalent of one hour of class per week will be made up by extra homework and problem sessions. (Prereq 3211 and 3221 or equivalent. Qualified students interested in graduate credit should inquire at the time of registration)

Spring Qtr Sec 1 **W**—6-8:30, VH 207

mechanical engineering (ME)

(See also Professional Development Recognition Program in Engineering and Science, page 194)

Your attention is called to the Undergraduate Development Certificate in Mechanical Engineering—90 credits, see page 95.

Students interested in a degree in Mechanical Engineering, see page 67.

Fulton Holtby, Associate 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

Ephraim M. Sparrow, Professor of Mechanical Engineering

ME 0001 REFRESHER COURSE FOR MECHANICAL ENGINEERS. No credit. Tuition equivalent to 4 credits, \$56.

This course is designed for practicing engineers, and will consist of lectures and problem sessions. (Prereq BME or equivalent degree or completion of Parts I and II of State Board Examination)

Winter Qtr Sec 1 **W**—6-9:00, MechE 321

(See also refresher courses in engineering fundamentals, page 194; civil engineering, page 136; electrical engineering, page 159.)

ME 0024C-0025C MACHINE DESIGN I-II. 5 certificate credits each semester, \$70 each semester.

Fundamental principles of design of machine elements: lubrication, theory, and application; friction drivers, screws, gears, belts, connectors, flywheels, machine frames, shrink fits, stress concentration, vibration analysis, and application of velocity and acceleration analysis to machine design problems. The course will consist of a series of lectures and problems to be solved in class. Laboratory experiments will be used whenever possible. Special movies will be used. (Prereq Math 0009 or # for 0024C; 0024C for 0025C)

Fall Sem 0024C Sec 1 **Th**—6-9:00, MechE 302

Spring Sem 0025C Sec 2 **Th**—6-9:00, MechE 302

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

mechanical engineering

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ME 0030C SYSTEM INSTRUMENTATION AND CONTROL. 5 certificate credits, \$70.

Basic theory and operation of automatic controls including industrial instrumentation. Linear feedback control systems including mathematical representation and analysis. On-off, proportional, floating and rate response in control systems. Fluidic principles and fluidic logic applied to system control. Course includes lecture and laboratory. (Prereq Math 0009 or §)

Spring Sem Sec 1 T—6-9:00, MechE 302

ME 3201 MECHANICAL ENGINEERING SYSTEMS ANALYSIS. 4 degree credits, \$56.

Modeling and analytic description of mechanical systems. Properties of linear models with emphasis on automatic computation solution. Necessary background includes differential equations. (Prereq Math 3221 or 1250 or §)

Fall Sem Sec 1 Th—6-8:30, MechE 108

ME 3203 ANALYSIS OF MECHANISM SYSTEMS. 4 degree credits, \$56.

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 Sem Sec 1 Th—6-8:30, MechE 108

ME 3205 ENGINEERING SYSTEMS DESIGN. 4 degree credits, \$56.

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)

Spring Qtr Sec 1 Th—6-9:20, MechE 321 (2 additional sessions arr.)

ME 3301 THERMODYNAMICS. 4 degree credits, \$56.

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 Phys 1281 and Math 3221 or 1250 or §)

Fall Qtr Sec 1 T—6-9:20, MechE 102 (2 additional sessions arr.)

ME 3303 APPLIED THERMODYNAMICS. 4 degree credits, \$56.

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 Qtr Sec 1 T—6-9:20, MechE 102 (2 additional sessions arr.)

ME 3701-3702 BASIC MEASUREMENTS LABORATORY I AND II. 2 degree credits each quarter, \$28 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 113301 for 3701; 3701 for 3702. 1 lect and 3 lab hrs per wk)

Fall Qtr Sec 1 W—6-9:00, MechE 370

ME 3900 INTRODUCTION TO ENGINEERING STATISTICS. 4 degree credits, \$56.

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—6-9:00, MechE 302

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See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

mechanical engineering—metallurgical engineering

5342 HEAT TRANSFER. 4 degree credits, \$60.

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 Math 3221 or 1250, ME 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, \$60.

Compressible flow of gases in engineering systems such as nozzles, ducts, combustion chambers, ramjets, pipe lines, etc. Isentropic flow in variable area passages. Shock waves. Flow with wall friction, heat transfer, and mass transfer. (Prereq CE 3400, ME 3301 or equiv. Qualified students interested in graduate credit should inquire at time of registration)

Spring Qtr Sec 1 M—6-9:20, MehE 321

mechanics and materials

(See Aerospace Engineering and Mechanics)

medicine

For information on non-credit conferences or workshops in medicine, please contact Office of Continuing Medical Education, 207 Nolte Center; telephone 373-8012.

(See also Laboratory Medicine; Public Health; and Phil 5770, Medical Ethics)

metallurgical engineering (MetE)

(See also Professional Development Recognition Program in Engineering and Science, page 194)

(See also Refresher Course in Engineering Fundamentals, IT 0001, page 194)

Henry S. Jerabek, Associate Professor of Metallurgy

Louis E. Toth, Professor of Chemical Engineering

MetE 0001C PHYSICAL METALLURGY. 3 certificate credits, \$42.

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 M—6:20-8:50, MinMet 116, Jerabek, Toth

MetE 0002C PHYSICAL METALLURGY. 3 certificate credits, \$42.

Alloy steels, hardenability and weldability, alloys for high temperatures. Crystal structure and defect structures, theory of hardening processes. Welding metallurgy. Structure and properties of plastics. (Prereq 0001C or $\$$. Offered alternate years)

Winter Qtr Sec 1 M—6:20-8:50, MinMet 116, Jerabek, Toth

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

microbiology—middle eastern languages

microbiology (MicB)



James T. Prince, Associate Professor of Microbiology
Edwin L. Schmidt, Professor of Microbiology

***MicB 3103 GENERAL MICROBIOLOGY.** 5 degree credits, \$70 plus \$4 course fee.
Total \$74.

Morphology, physiology, taxonomy, and ecology of bacteria and other microorganisms. General biology of microorganisms and practical applications of fundamental 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 \pm . Microscope required. [Inquire at first class meeting about rental]. Limited to 35 students)

Winter Qtr Sec 1 MW—Lect 6:15-7:45, HS Unit A 2-520

MW—Lab 7:45-10:00, HS Unit A 2-252, Schmidt, Prince

middle eastern languages

Cassette tapes are available to extension classes students on a take-home basis. Student 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.-8 p.m., Monday-Thursday; 8 a.m.-6 p.m., Friday; 9 a.m.-3 p.m., Saturday; closed Sunday.

arabic (Arabic)

Anwar Chejne, Professor of Arabic

Caesar Farah, Professor of Arabic

George Koury, Assistant Professor of Arabic

Arab 1101-1102 INTRODUCTION TO ARABIC GRAMMAR AND READING. 5 degree credits each semester, \$56 plus \$3 course fee. **Total \$59** each semester.

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

middle eastern languages

Vocabulary, forms and syntax; intensive graded reading and speaking facility. (No prereq for 1101; 1101 or II for 1102)

Fall Sem 1101 Sec 1 M—6:20-9:05, NH 209A, Chejne

Spring Sem 1102 Sec 2 M—6:20-9:05, NH 209A, Chejne

MidE 3525 THE MODERN ARAB WORLD: 1915 TO PRESENT. 4 degree credits. \$56.

Struggle for independence; rise of independent Arab states in the Near East and North Africa; problems of social, cultural, economic, and literary developments; modernizing trends. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 61])

Fall Qtr Sec 1 T—6:20-8:00, FolH 202, Farah

hebrew (Heb)

Raphael Jospe, Instructor in Middle Eastern Languages

Jonathan Paradise, Assistant Professor of Hebrew

Daniel Reisman, Assistant Professor of Hebrew

The following non-language classes may be applied toward the CLA foreign language requirement, Route II (see page 61): Hist 1051, 3051; Hist 3591, 3592, 3593; Mid E 1501, 1502, 1503, 3501, 3502, 3503

***Heb 1104-1105 INTRODUCTION TO BIBLICAL HEBREW.** 5 degree credits each semester, \$70 each semester.

For students who have no previous knowledge or background in Hebrew. It stresses the reading of Biblical Hebrew and provides the essentials of grammar, syntax, and vocabulary. (No prereq for 1104; 1104 for 1105. Limited to 30 students)

Fall Sem Sec 1 M—6:20-8:50, Jones 1, Reisman

Spring Sem Sec 2 M—6:20-8:50, Jones 1, Reisman

MidE 1501, 1502, 1503 THE BACKGROUND OF THE BIBLE. (replaces Heb 1501, 1502, 1503) 4 degree credits each quarter, \$3501, 3502, 3503, Hist 3501, 3502, 3503. \$56 each quarter.

The study of Biblical literature places it 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 classroom discussion. Colored slides will be used to help illustrate the contribution of archaeology to Biblical studies. **1501:** The Near East before Biblical times. The Bible's indebtedness to pagan literature, religion, and law. The formation of the Hebrew people. **1502:** Conquest and settlement. Political, economic, and religious development. The structure of the Biblical narrative. **1503:** The divided kingdom, classical prophecy, destruction and exile, restoration, the emergence of Judaism. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 61]. Meets concurrently with MidE 3501, 3502, 3503, and Hist 3501, 3502, 3503)

Fall Qtr 1501 Sec 1 T—6:20-8:50, NH 122, Paradise

Winter Qtr 1502 Sec 2 T—6:20-8:50, NH 122, Paradise

Spring Qtr 1503 Sec 3 T—6:20-8:50, NH 122, Paradise

MidE 3501, 3502, 3503 THE BACKGROUND OF THE BIBLE. (replaces Heb 3501, 3502, 3503) 4 degree credits each quarter, \$1501, 1502, 1503, Hist 3501, 3502, 3503. \$56 each quarter.

See course description for MidE 1501, 1502, 1503. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 61]. Meets concurrently with MidE 1501, 1502, 1503 and Hist 3501, 3502, 3503. Arrangements for Upper Division credit should be made with instructor)

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

middle eastern languages—music

Fall Qtr 3501 Sec 1 T—6:20-8:50, NH 122, Paradise

Winter Qtr 3502 Sec 2 T—6:20-8:50, NH 122, Paradise

Spring Qtr 3503 Sec 3 T—6:20-8:50, NH 122, Paradise

jewish studies (JS)

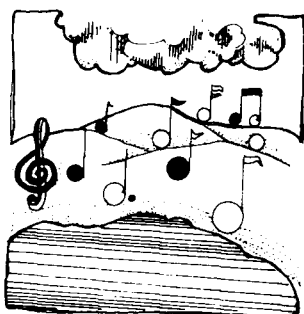
JS 1034 INTRODUCTION TO JUDAISM. 4 degree credits, \$56. (♦\$28)

Basic concepts, movements, and institutions of classical Judaism in its evolution, as manifested in the literature and festivals of the Jewish people from Second Commonwealth Times to the present. (No prereq)

Spring Qtr Sec 1 Th—6:20-8:50, NH 122, Jospe

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music (Mus)



(See also GC 1331, Music Today: Music in Society (Humanities and Phys 5090, Physics of Musical Instruments)

Frank P. A. Bencriscutto, Professor of Music

Maury Bernstein, Lecturer in Music

Paul Fetter, Professor of Music

Lee Humphries, Instructor in Music

Dwayne Jorgenson, Instructor in Music

Thomas Lancaster, Assistant Professor of Music

Adrian Lauritzen, Associate Professor of Music

Richard Massmann, Associate Professor of Music

Gwen Perun, Assistant Professor of Music

Johannes Riedel, Professor of Music

Arlin Snesrud, Instructor in Music

Judith Stringer, Instructor in Music

Everett Sutton, Assistant Professor of Music

John Tartaglia, Assistant Professor of Music

Edgar Turrentine, Professor of Music Education

Mary West, Associate Professor of Music

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

Non-credit Courses

Applicants who wish to enroll for non-credit instruction in applied music should contact Ms. Jacobson at 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, \$28 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—6:30-7:45, MusEd 103, Lauritzen

0052C Sec 2 Th—6:30-7:45, MusEd 103, Lauritzen

Spring Sem 0051C Sec 3 Th—6:30-7:45, MusEd 103, Lauritzen

0052C Sec 4 T—6:30-7:45, MusEd 103, Lauritzen

Mus 1171-1172-1173 GUITAR: CLASS LESSONS. 2 degree credits each quarter, \$28 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)

Fall Qtr 1171 Sec 1 Th—6:20-8:20, WuH 7, Stringer

Winter Qtr 1172 Sec 2 Th—6:20-8:20, WuH 7, Stringer

1171 Sec 3 T—6:20-8:20, WuH 7, Stringer

Spring Qtr 1173 Sec 4 Th—6:20-8:20, WuH 7, Stringer

1172 Sec 5 T—6:20-8:20, WuH 7, Stringer

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, \$14.

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, Bencriscutto

Winter Qtr Sec 2 **Days arr.** 3:15-5:05, NMA 4, Bencriscutto

Spring Qtr Sec 3 **Days arr.** 3:15-5:05, NMA 4, Bencriscutto

Mus 1420 ORCHESTRA. 1 degree credit, \$14.

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, \$14.

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)

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

music

- 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 credits, \$14.

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 WOMEN'S CHORUS. 1 degree credit, \$14.

Rehearsals and performances cover standard women's glee club material as well as special arrangements. (Prereq #)

- Fall Qtr** Sec 13 **MWF**—12:15-1:05, NMA 4
Winter Qtr Sec 14 **MWF**—12:15-1:05, NMA 4
Spring Qtr Sec 15 **MWF**—12:15-1:05, NMA 4

Mus 1430 ST. PAUL CAMPUS CHORUS. 1 degree credit, \$14.

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 16 **TTh**—4:30-6:00, Hort 310
Winter Qtr Sec 17 **TTh**—4:30-6:00, Hort 310
Spring Qtr Sec 18 **TTh**—4:30-6:00, Hort 310

Mus 5490 CHAMBER SINGERS. 2 degree credits, \$30.

A small mixed vocal ensemble of select voices. Sacred and secular music from 16th century to contemporary composers prepared for concert presentation. (Prereq #. Qualified students may register for graduate credit at the University of Minnesota)

- Fall Qtr** Sec 1 **MWF**—4:15-5:30, WuH 7, Lancaster
Winter Qtr Sec 2 **MWF**—4:15-5:30, WuH 7, Lancaster
Spring Qtr Sec 3 **MWF**—4:15-5:30, WuH 7, Lancaster

MUSIC THEORY, HISTORY, LITERATURE, PEDAGOGY

Mus 1001 FUNDAMENTALS OF MUSIC. 4 degree credits, \$56.

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, MusEd 103, Lauritzen
Winter Qtr Sec 2 **M**—6-9:20, MusEd 103, Lauritzen
Spring Qtr Sec 3 **M**—6-9:20, MusEd 103, Lauritzen

Mus 1014 INTRODUCTION TO MUSIC. 4 degree credits, \$56. (♦\$28)

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)

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

Winter Qtr Sec 1 **M**—6:10-9:30, ScH 3, Turrentine

Spring Qtr Sec 2 **M**—6:10-9:30, ScH 3, Turrentine

Mus 1501-1502-1503 MATERIALS AND STRUCTURE OF MUSIC I. 4 degree credits each quarter, \$56 each quarter. (♦\$28 each quarter)★1501

Materials and structure of music; melody; tonality; rudiments of counterpoint; texture and form; harmony; sight-singing and ear training. (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 **TTh**—6:20-8:30, ScH 4, Humphries

Winter Qtr 1502 Sec 2 **TTh**—6:20-8:30, ScH 4, Humphries

Spring Qtr 1503 Sec 3 **TTh**—6:20-8:30, ScH 4, Humphries

Mus 1801, 1802, 1803 AMERICAN FOLK MUSIC. 3 degree credits each quarter, \$42 each quarter. (♦\$21 each quarter)

An exploration of the folk song traditions which have had an important role in America's popular history. Will examine the spirituals, blues, gospel music of the Afro-American; vocal and instrumental music of the Southern Appalachians; songs and ballads of the New England and Mid-Western traditions; music of Louisiana's Cajuns; Spanish-American music of the Southwest; Scandinavian-dialect songs of the Upper Midwest; other U.S. traditions. Emphasis is on folk music listening and appreciation. (No prereq)

Fall Qtr 1801 Sec 1 **W**—6:20-8:50, WuH 320, Bernstein

Winter Qtr 1802 Sec 2 **W**—6:20-8:50, WuH 320, Bernstein

Spring Qtr 1803 Sec 3 **W**—6:20-8:50, WuH 320, Bernstein

Mus 3021 INTRODUCTION TO MUSIC. 5 degree credits, \$70. (♦\$35)

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 19, Sutton

Mus 3571 MUSIC CALLIGRAPHY. 2 degree credits, \$28. (♦\$14)

Techniques and forms of notation; manuscript preparation and layout; duplication methods; and general copyright procedures. (No prereq)

Fall Qtr Sec 1 **WF**—9:15-10:00, ScH 2, Snesrud

Mus 3584 MUSIC: ITS MEANING AND STRUCTURE. 4 degree credits, \$56. (♦\$28)

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 **M**—6:10-9:30, ScH 103, Fetler

***Mus 5351-5352-5353 PIANO PEDAGOGY I.** 2 degree credits each quarter, \$30 each quarter.

Demonstration and discussion of group piano instruction at the elementary level. Selected literature appropriate to conceptual learning through the discovery approach. (Prereq 12 cr in piano or # for 5351; 5351 for 5352; 5352 for 5353. Limited to 25 students. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr 5351 Sec 1 **W**—10 a.m.-12:00, MacP 221, Perun

Winter Qtr 5352 Sec 2 **W**—10 a.m.-12:00, MacP 221, Perun

Spring Qtr 5353 Sec 3 **W**—10 a.m.-12:00, MacP 221, Perun

Mus 5361-5362-5363 VIOLIN PEDAGOGY I. 2 degree credits each quarter, \$30 each quarter.

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

music

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. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr 5361 Sec 1 W—4:15-6:00, 321½ SE 14 Ave; West, Tartaglia

Winter Qtr 5362 Sec 2 W—4:15-6:00, 321½ SE 14 Ave; West, Tartaglia

Spring Qtr 5363 Sec 3 W—4:15-6:00, 321½ SE 14 Ave; West, Tartaglia

Mus 5704, 5705 LATIN AMERICAN MUSIC. 4 degree credits each quarter, \$60 each quarter. (♦\$30 each quarter)

Pre-Maya and pre-Inca times through colonial period to present. Music of Indians in Brazil, Inca countries. Afro-, Ibero-Latin American music. Folk, popular, contemporary music. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr 5704 Sec 1 T—6:10-9:30, WuH 320, Riedel

Winter Qtr 5705 Sec 2 T—6:10-9:30, WuH 320, Riedel

TV

Mus 5711 AMERICAN POPULAR MUSIC

A series of 10 one-hour television programs. History of popular music in the U.S. in the nineteenth century. Contribution of Black music to nineteenth century popular music in America. Live music performances.

Program Titles: Ragtime; Ethnic Music (Czech, Scandinavian); Technology in Music (mechanical instruments); Social Dance Music (Polka, Mazurka, Square, Schottische); Parlor Music (Henry Russell, Louis Moreau Gottschalk, and Stephen Foster); Banjo; Barber Shop Songs; Theatre Music; Civil War Music; Brass Band Music.

● CREDIT REGISTRATION

4 degree credits, \$60 plus \$6 special fee (study guide). **Total \$66** (no text). In addition to viewing the television broadcasts, registrants will be expected to complete four brief reaction essays on required attendance at 1) ragtime concert, 2) barbership quartet performance, 3) banjo performance, 4) square dance. Paper required from graduate students. Take home final examination. The study guide will be mailed upon registration. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

● STUDY GUIDE ONLY

For home viewers who do not wish to register for credit but want to follow the television lectures, a study guide may be purchased from Extension Classes for \$6.

Winter Qtr Sec 1 M—9-10:00, KTCA-TV, Channel 2; Riedel

Mus 5712 AMERICAN POPULAR MUSIC. 4 degree credits, \$60. (♦\$30)

History of popular music in the U.S. from the first half of the 19th century through 1970—the lyrics and music, composers, performers, bands. Its various types and forms. The contribution of black music to popular music in cakewalk, protest music, ragtime, jazz and rock. The impact of American popular music on popular music of the world. The impact of popular music on church music throughout the ages. Two additional credits available for American Popular Music Laboratory for \$30 tuition. Only students registered for credit may take the laboratory for credit. (See "X" registration, page 46). Students registered on any of the no-credit reduced tuition plans (see page 32) may also register for the laboratory but only on a no-credit basis for \$30. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 T—6:20-9:30, WuH 320, Riedel

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

Piano Technician

A special course in piano tuning and repairing will be offered at MacPhail Center, the Fall Session beginning in September, 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 \$250.00 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)

(See also Phys 5090, 5094, 5095, Physics and Music courses, page 285)

Arnold R. Caswell, Professor of Music Education

Joanna Cortright, Instructor in Music Education

Jane Frazee, Lecturer in Music Education

Richard Massmann, Associate Professor of Music

Peter G. Roll, Associate Professor of Physics

John Tartaglia, Assistant Professor of Music

Edgar Turrentine, Professor of Music Education

Sue VanValkenberg, Instructor in Music

S-N registration not permitted in Music Education unless specifically indicated in course description.

MuEd 5750 WORKSHOP: MUSIC EDUCATION. This offering for 3 degree credits each quarter (maximum 12 cr) \$45 each quarter.

Selected topics in music education. **Emphasis this offering: Orff Schulwerk for teachers.** Participant will explore American folk material illustrating harmonic, melodic and polyphonic settings in elemental style. Integration of movement, recorder, improvisation, ensemble playing and singing activities will be the goal of each class session. The course will include material for skill development: Sight singing, ear training, and rhythmic studies. Canon, variation and sectional forms will be related to parallel examples from musical literature. **Fall Quarter:** beginning level; **Spring Quarter:** intermediate level. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **W**—7-9:00, Sch 4, Caswell

Spring Qtr Sec 2 **W**—7-9:00, Sch 4, Caswell

MuEd 5750 WORKSHOP: MUSIC EDUCATION. This offering for 3 degree credits (maximum 12 cr) \$45.

Selected topics in music education. **Emphasis this offering: Seminar on the physics of brass instruments.** A seminar and study group on the physical characteristics and processes involved in the playing of brass (lip-reed) musical instruments. The emphasis will be on understanding in non-mathematical and largely non-technical terms so that the knowledge can be applied to improve

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

music education

performance and the teaching of students on brass instruments. Some skills and methods will be developed during the seminar in the use of electronic instrumentation to provide visual cues to the performer or student to assist the learning process. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 3 W—6:20-9:30, Sch 2, Turrentine, Roll

MuEd 5750 WORKSHOP: MUSIC EDUCATION. This offering for 2 degree credits (maximum 12 cr) \$30.

Selected topics in music education. **Emphasis this offering: Orchestral conducting problems.** Participant will review basic baton techniques, score reading techniques, editing of string parts, and stylistic analysis. Participant will also perform in a string orchestra on her or his major and minor instruments, reading materials applicable to public school ensembles. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 4 W—4-6:00, MacP, Massmann

MuEd 5750 WORKSHOP: MUSIC EDUCATION. This offering for 2 degree credits (maximum 12 cr) \$30.

Selected topics in music education. **Emphasis this offering: String repair.** Participant will be acquainted with the use of basic string repair tools and the specific procedures for making the basic repairs and adjustments on violins and viola. Student will be required to purchase a string repair kit (\$20). Participant will also perform in a string orchestra on her or his major and minor string instruments, reading materials applicable to public school ensembles. (No prereq. Intended for non-music education majors. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 5 M—4-6:00, MacP, Tartaglia

MuEd 5750 WORKSHOP: MUSIC EDUCATION. This offering for 2 degree credits (maximum 12 cr), \$30.

Selected topics in music education. **Emphasis this offering: Cello pedagogy.** Varied cello topics including differences between violin and cello techniques, teaching of thumb position, editing fingerings, and the teaching of vibrato. A portion of the class period will also be assigned to participant performance of string ensemble and orchestral repertoire usable in the public schools. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 6 M—4-6:00, MacP, Van Valkenberg

MuEd 5750 WORKSHOP: MUSIC EDUCATION. This offering for 2 degree credits (maximum 12 cr) \$30.

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. It is an active participation class with participants experiencing the activities and using the techniques of music learning that they can 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. (No prereq. Winter quarter is repetition of fall quarter offering. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 7 T—7-9:00, MacP, Cortright

Winter Qtr Sec 8 T—7-9:00, 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.

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natural science and technology (NSci)

William Franta, Assistant Professor of Computer, Information, and Control Sciences

NSci 3201 PERSPECTIVES ON COMPUTERS AND SOCIETY. 4 degree credits, \$56 plus \$4 special fee. **Total \$60.**

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 CICS 3001. (Prereq sophomore or §)

Fall Sem Sec 1 **W**—8-9:40, MainE 217, Franta

natural science

(General College—GC)

Douglas Dearden, Professor
Niles Jefferson, Associate Professor
Valerie Liston, Instructor
Fredric R. Steinhauser, Professor

The Natural Sciences. Courses in this area have common purposes: to provide the student with knowledge of the biological and physical sciences, to increase his understanding of the physical environment, and to enhance his appreciation of the role of science in modern life.

GC 1112 MAN AND HIS ENVIRONMENT. 4 degree credits, \$56. (◆\$28)

This course deals with the biological principles of the interrelationships which exist between man and his environment, or the study of ecology as applied to the problems of man's past, present, and future existence. The basic principles of ecology are applied to such topics as the structure and function of the ecosystem; the pollution of air, water, and soil; the population explosion; the evolution of man, his migrations, and the development of human settlements or bio-social environments; marine, radiation, and space biology; and the creation of livable environments for man; present and future. (No prereq)

Winter Qtr Sec 1 **T**—6:20-8:50, SciCB 125, Jefferson

Sec 2 **Th**—6:20-8:50, Elim Church, Room 205, 40th & Broadway, Robbinsdale, Liston

GC 1113 UTILIZATION OF NATURAL RESOURCES. 4 degree credits, \$56. (◆\$28)

The natural resources (land, soil, water, plants, animals, forests, minerals, wildlife), their location, characteristics and use by man. (No prereq)

Spring Qtr Sec 1 **T**—6:20-8:50, VH 1, Jefferson

GC 1132 HUMAN ANATOMY AND PHYSIOLOGY. 4 degree credits, \$56. (◆\$28)

Structure and function of the human body and its parts, including basic principles and concepts; systems (digestive, skeletal, etc.), location, structure, and function of primary organs in the normal body, and some of the common disorders. No laboratory. Films and demonstrations supplement lectures and class discussions. (No prereq)

Fall Qtr Sec 1 **T**—7-9:30, Sand JHS 214, Dearden (Limit 35 students*)

GC 1431 FUNDAMENTAL COLLEGE MATHEMATICS PROGRAM. 5 degree credits, \$70.

Audio-tutorial program of study of basic mathematics skills in arithmetic, algebra, geometry, and applications of mathematics. Opportunities for self-pacing, test-out, and flexibility in amount of credit earned. Each student will have a

See symbols, page 33.

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natural science—nursing

mathematics adviser with whom he will work to select and master materials he needs to build up proficiency and background necessary to his educational and vocational goals. (No prereq)

Fall Qtr Sec 1 **TTh**—6:30-8:35, FoIH 109

Winter Qtr Sec 2 **TTh**—6:30-8:35, FoIH 109

Spring Qtr Sec 3 **TTh**—6:30-8:35, FoIH 109

GC 1445 MATHEMATICS: INTERMEDIATE ALGEBRA. 5 degree credits, \$70.★

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)

Fall Qtr Sec 1 **MW**—6:30-8:35, FoIH 107

Winter Qtr Sec 2 **MW**—6:30-8:35, FoIH 102

Spring Qtr Sec 3 **MW**—6:30-8:35, FoIH 102

GC 3841 MINNESOTA RESOURCES. 4 degree credits, \$56. (◆\$28)

The quality of life in contemporary Minnesota is evaluated within the framework of the state's resources. Opportunity is provided to study and analyze the cultural, physical and economic characteristics of the state. The choices Minnesotans have made in the use of the physical environment are observed. Other topics may include the problem of urban development and environmental controversies such as pollution controls, conservation and land use. Classes are supplemented by field trips, independent investigations, and audio-visual materials. (No prereq)

Winter Qtr Sec 1 **T**—6:20-8:50, NH 216, Steinhauer

(See also Anatomy, and Physical Medicine and Rehabilitation)

norwegian

(See Scandinavian Languages)

nursing (Nurs)

Ida Marie Martinson, Assistant Professor of Nursing

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 licence 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.

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.

See symbols, page 33.

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nursing—operations analysis and management

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 0362C INTRODUCTION TO ASSESSING HEALTH STATUS OF INDIVIDUALS. 3 certificate credits, \$42.

The course is designed to assist nurses to improve their nursing assessment skills. It will include detailed orientation to obtaining a valid patient history and doing a physical examination. The course will not include supervised clinical practice but it is hoped that each student will be able to obtain practice in her work setting. (Prereq Registered Nurse)

Fall Qtr Sec 1 **Th**—6-8:30, PoH 2309

Nurs 5201 ROLE OF NURSING WITHIN HEALTH CARE. 2 degree credits, \$30.

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)

Fall Qtr Sec 1 **M**—6-8:30, PoH 2309

Nurs 5202 SYSTEMATIC PROCESS I. 2 degree credits, \$30.

Rationale for systematic approach to goal achievement. Development of steps to systematic achievement of identified goals. (Prereq Nurs 5201, Psy 1001, ¶Psy 1001, or §. May not be taken for graduate credit)

Winter Qtr Sec 1 **M**—6-8:30, PoH 2309

Nurs 5203 ADAPTATION I. 2 degree credits, \$30.

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 Nurs 5201, Psy 1001, ¶Psy 1001, Phys 3051 or ¶Phys 3051 or equiv experience. May not be taken for graduate credit)

Winter Qtr Sec 1 **W**—6-8:30, PoH 2309

***Nurs 5204 HELPING RELATIONSHIPS I.** 2 degree credits, \$30.

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 Nurs 5201, Psy 1001 or ¶Psy 1001. Limited to 14 students. May not be taken for graduate credit)

Spring Qtr Sec 1 **M**—6-8:30, PoH 2309

***Nurs 8021 RESEARCH IN NURSING.** 3 degree credits, \$48.

This course is designed to develop understanding of the research process, status of nursing research, and potential areas for research in nursing; and to increase skill in the critical assessment of research and design of a research study. (Prereq PsyF 5110. Limited to 15 students. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **T**—4-7:00, PoH 4312, Martinson

operations analysis and management (OAM)

Carl R. Adams, Associate Professor of Operations Analysis and Management

John C. Anderson, Assistant Professor of Operations Analysis and Management

Gary W. Dickson, Professor of Operations Analysis and Management

Roger G. Schroeder, Associate Professor of Operations Analysis and Management

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

operations analysis and management—philosophy

***OAM 3055 INTRODUCTION TO MANAGEMENT SCIENCES.** 4 degree credits, \$56 plus \$4 course fee. **Total \$60.**

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 QA 1050, MIS 3099, or 13099, Math 1142 or equiv. Limited to 50 students)

Fall Qtr Sec 1 **T**—5:30-8:50, AndH 250, Adams

Sec 2 **W**—5:30-8:50, AndH 250, Anderson

Winter Qtr Sec 3 **T**—5:30-8:50, AndH 330, Adams

Sec 4 **W**—5:30-8:50, AndH 330, Dickson

Spring Qtr Sec 5 **M**—5:30-8:50, AndH 330, Schroeder

Sec 6 **W**—5:30-8:50, Kel HS 168-170, Dickson

***OAM 5056 APPLICATIONS OF ANALYTICAL METHODS AND COMPUTERS IN OPERATIONS MANAGEMENT AND ANALYSIS.** 5 degree credits, \$75 plus \$4 course fee. **Total \$79.**

The application of forecasting methods, optimization techniques; simulation, product and project management methods; inventory models, quality control techniques and computer technology problems encountered in organizational management. Specific laboratory sessions will include problem solving and case analysis. (Prereq OAM 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, AndH 370, Anderson

ophthalmology

(See page 81)

pharmacy

For information on non-credit conferences or workshops in pharmacy, please contact Thomas M. McKennell, Continuing Education in Pharmacy, 109 Appleby; telephone 373-2197.

philosophy (Phil)

Alan Brinton, Instructor in Philosophy

John Dolan, Associate Professor of Philosophy

Keith Gunderson, Professor of Philosophy

Herbert Hochberg, Professor of Philosophy

Charles Barry Hoffmaster, Instructor in Philosophy

Jasper Hopkins, Professor of Philosophy

Douglas Lewis, Associate Professor of Philosophy

H. E. Mason, Professor of Philosophy

Terrance McConnell, Instructor in Philosophy

James Smith, Instructor in Philosophy

Burnham Terrell, Professor of Philosophy

John R. Wallace, Professor of Philosophy

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

- Phil 1001 LOGIC.** 5 degree credits, \$70 (◆\$35) ★
 Special emphasis upon the application of formal techniques for evaluating arguments. (No prereq)
Fall Qtr Sec 1 T—6:20-8:50, ForH 349
Winter Qtr Sec 2 Th—6:20-8:50, ForH 349
Spring Qtr Sec 3 W—6:20-8:50, ForH 349
- Phil 1002 INTRODUCTION TO PHILOSOPHY.** 5 degree credits, \$70. (◆\$35) ★
 Introduction to permanent problems; principal methods and schools of philosophy; historical and contemporary views. (No prereq)
Fall Qtr Sec 1 Th—6:20-8:50, ForH 349
Winter Qtr Sec 2 W—6:20-8:50, ForH 349
Spring Qtr Sec 3 M—6:20-8:50, ForH 349
- Phil 1003 ETHICS.** 5 degree credits, \$70. (◆\$35) ★
 Examination of problems that arise when human beings attempt to think systematically about conduct and values. (No prereq)
Fall Qtr Sec 1 W—6:20-8:50, ForH 349
Winter Qtr Sec 2 T—6:20-8:50, ForH 349
Spring Qtr Sec 3 Th—6:20-8:50, ForH 349
- Phil 1004 POLITICAL PHILOSOPHY.** 5 degree credits, \$70. (◆\$35)
 An introduction to some of the central concepts and principal theories of political philosophy. (No prereq)
Fall Qtr Sec 1 M—6:20-8:50, ForH 175
- Phil 1011 SCIENCE AND RELIGION.** 5 degree credits, \$70. (◆\$35) ★
 Inquiry into nature of science and religion as currently interpreted; attempt to find grounds of conflict and/or reconciliation. (No prereq)
Winter Qtr Sec 1 M—6:20-8:50, ForH 175
- Phil 1410 SELECTED TOPICS IN MORAL AND POLITICAL PHILOSOPHY: NON-VIOLENCE.** 5 degree credits, \$5760. \$70. (◆\$35)
 An introduction to some of the central themes of pacifist thought. The readings discussed will include selections from the writings of such pacifists as Gandhi, Muste, King, Deming, the Berrigans and Dellinger and selections from the writings of some non-pacifists whose thought coincides at crucial points with pacifist views. (e.g. Thoreau and Camus) (No prereq. Meets concurrently with 5760)
Spring Qtr Sec 1 T—6:20-8:50, ForH 175, Dolan
- Phil 3001 GENERAL HISTORY OF WESTERN PHILOSOPHY.** 5 degree credits, \$70 (◆\$35) ★
 Survey of major developments in Western philosophic thought: Greek philosophy, pre-Socrates, Socrates, Plato, Aristotle. (No prereq. May be applied toward the CLA foreign language requirement. Route II [see page 61])
Fall Qtr Sec 1 W—6:20-8:50, ForH 359
- Phil 3002 GENERAL HISTORY OF WESTERN PHILOSOPHY.** 5 degree credits, \$70. (◆\$35)
 Survey of major developments in Western philosophic thought: Stoicism, Epicureanism, and medieval Christian synthesis. (No prereq. May be applied toward the CLA foreign language requirement. Route II [see page 61])
Winter Qtr Sec 1 W—6:20-8:50, ForH 359
- Phil 3003 GENERAL HISTORY OF WESTERN PHILOSOPHY.** 5 degree credits, \$70. (◆\$35) ★
 Survey of major developments in Western philosophic thought: early modern

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See symbols, page 33.

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philosophy

philosophy from Descartes through Hume; impact of science; backgrounds of contemporary philosophical problems. (No prereq)

Spring Qtr Sec 1 **W**—6:20-8:50, ForH 175

Phil 3004 GENERAL HISTORY OF WESTERN PHILOSOPHY. 5 degree credits, \$70. (◆\$35) ★

Survey of major developments of Western philosophic thought: later modern philosophy from Kant through 19th century. (No prereq)

Winter Qtr Sec 1 **M**—6:20-8:50, ForH 349

Phil 3231 INTRODUCTION TO THE PHILOSOPHY OF LANGUAGE. 5 degree credits, \$70. (◆\$35)

A survey of some of the central topics in the philosophy of language, among them: theories of reference, linguistic truth, the relation between language and thought, translation and synonymy. (No prereq)

Fall Qtr Sec 1 **M**—6:20-8:50, ForH 349, Dolan

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(See also Linguistics)

Phil 3302 MORAL PROBLEMS OF CONTEMPORARY SOCIETY. 5 degree credits, \$70. (◆\$35)

A consideration of some of the fundamental moral dilemmas confronting people in the present time. (No prereq)

Fall Qtr Sec 1 **T**—6:20-8:50, ForH 120, Wallace

Spring Qtr Sec 2 **T**—6:20-8:50, ForH 120

Phil 3502 INTRODUCTION TO AESTHETICS. 5 degree credits, \$70. (◆\$35)

An examination of different views as to the nature and function of art and the role of representation, expression, and aesthetic experience. (No prereq)

Spring Qtr Sec 1 **Th**—6:20-8:50, ForH 285, Hochberg

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Phil 3521 PHILOSOPHY OF RELIGION. 5 degree credits, \$70. (◆\$35)

Discussion of ground and sanctions of religion, according to various philosophies. (No prereq)

Fall Qtr Sec 1 **Th**—6:20-8:50, ForH 285, Hopkins

(See also *Philosophy of Religion*, page 181)

Phil 5054 KIERKEGAARD. 5 degree credits, \$75. (◆\$37.50)

Detailed examination of major philosophical works. May be applied toward the CLA foreign language requirement, Route II (see page xx). (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, Mason

Phil 5324 ETHICS AND EDUCATION. 5 degree credits, \$75. (◆\$37.50)

Recent studies relating ethical theory and philosophy of education; particular attention to theories of moral development and moral education. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **M**—6:20-8:50, ForH 160, Terrell

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(See also Education)

Phil 5512 PHILOSOPHY AND LITERARY CRITICISM. 5 degree credits, \$75. (◆\$37.50)

An examination of the goals and aims of literary criticism and the problems which arise in attempting to justify various principles of criticism. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **Th**—6:20-8:50, ForH 359, Gunderson

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See building abbreviations, page 324; see department abbreviations, page 331.

philosophy—physical education and recreation

Phil 5615 MINDS, BODIES, AND MACHINES. 5 degree credits, \$75. (◆\$37.50)

Can machines think? Should robots be given civil rights? What is the relationship between the mind and the body? These and other questions will be discussed and explored. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **W**—6:20-8:50, ForH 285, Gunderson

(For further information on Phil 5615, see page 183)

Phil 5701 SURVEY OF CONTEMPORARY PHILOSOPHY. 5 degree credits, \$75. (◆\$37.50)

Current systematic and critical philosophers, as represented by their principal exponents. (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, Lewis

Phil 5760 SELECTED TOPICS IN MORAL AND POLITICAL PHILOSOPHY: NON-VIOLENCE. 5 degree credits, \$1410. \$75. (◆\$37.50)

An introduction to some of the central themes of pacifist thought. The readings discussed will include selections from the writings of such pacifists as Gandhi, Muste, King, Deming, the Berrigans and Dellinger and selections from the writings of some non-pacifists whose thought coincides at crucial points with pacifist views (e.g., Thoreau and Camus). (No prereq. Meets concurrently with 1410. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **T**—6:20-8:50, ForH 175, Dolan

Phil 5770 SELECTED TOPICS IN PHILOSOPHY: MEDICAL ETHICS. 5 degree credits, \$75. (◆\$37.50)

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 for medical and nursing students, philosophy majors, pre-medical 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 **M**—6:20-8:50, ForH 130, Dolan, Mosser, Wallace

(See also Medicine, Laboratory Medicine, and Public Health)

photography

(See Art, Studio)

physical education and recreation (PE)

(See also Education)

Bruce Anderson, Associate Professor of Physical Education

Marjorie Cowmeadow, Instructor in Physical Education

Nadine Jette, Assistant Professor of Physical Education

John Kundla, Associate Professor of Physical Education

physical education and recreation

Mary B. Lampe, Associate Professor of Physical Education

James LaPoint, Assistant Professor of Physical Education

Craig Lincoln, Instructor in Physical Education

James Marshall, Assistant Professor of Physical Education

G. Robert Mowerson, Associate Professor of Physical Education

Fred L. Neff, Instructor in Physical Education

Robert Rice, Instructor in Physical Education

Lloyd Stein, Associate Professor of Physical Education

Edward Stern, Instructor in Physical Education

Lela June Stoner, Assistant Professor of Physical Education

Barbara Tennesen, Instructor in Physical Education

Linda Wells, Instructor 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: Helen M. Slocum, Coordinator, Continuing Education for the School of Physical Education and Recreation, Norris Gymnasium, University of Minnesota, Minneapolis, Minnesota 55455; or call (612) 373-3403.

S-N registration not permitted in Physical Education unless specifically designated in course description.

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 36).

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.

***PE 1800 WATER SAFETY INSTRUCTOR'S COURSE.** 2 degree credits, \$56 plus \$33.00 course fee. **Total \$59.**

Methods and procedures related to organization, content, and teaching of swimming and life saving; opportunity to qualify for the American Red Cross Water Safety Instructor's Certificate. (Prereq minimum age 17 and current American Red Cross Senior Life Saving Certificate. Limited to 28 students)

Spring Qtr Sec 1 T—5:30-8:30, NGW 58, Stoner

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

physical education and recreation

***PE 3114 PREVENTION AND CARE OF INJURIES.** 3 degree credits, \$42.

Policies for conditioning athletes in interscholastic and intercollegiate sports; safety controls. (Prereq 3110 or Anat 1027. Limited to 25 students)

Fall Qtr Sec 1 **T**—7:30-9:30, (one additional hour arr.), BFAB 125, Marshall

PE 3161 COACHING WOMEN IN COMPETITIVE SPORTS. 3 degree credits, \$42 plus \$3 course fee. **Total \$45.**

Psychological, sociological and physiological aspects of coaching women in competitive sports. (Prereq Upper Division)

Winter Qtr Sec 1 **M**—6-8:00, NGW 201, Cowmeadow

***PE 3171 BASKETBALL COACHING.** 2 degree credits, \$28.

Techniques, styles of offense and defense, conditioning and handling of players. (Prereq 1652 or \$. Limited to 25 students)

Fall Qtr Sec 1 **M**—7-9:00, NGW 153, Kundla, Wells

***PE 5620 PRACTICUM: PREVENTION AND CARE OF ATHLETIC INJURIES.** 3 degree credits, \$45 plus \$5 course fee. **Total \$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.) (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 **W**—7-9:30, BFAB 125, Stein

***PE 5700 WORKSHOP: DANCE IN EDUCATION.** This offering for 4 degree credits (maximum 12 cr) \$60.

History, principles, instructional techniques and materials for teaching dance in schools and recreational agencies. (**Focus this offering: Creative dance for children at the elementary level**) (No prereq. Limited to 20 students. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **W**—4:30-8:30, NGW Dance Studio, Jette

***PE 5700 WORKSHOP: DANCE IN EDUCATION.** This offering for 4 degree credits (maximum 12 cr) \$60.

History, principles, instructional techniques and materials for teaching dance in schools and recreational agencies. (**Focus this offering: Non-Partner Folk Dances**) (No prereq. Limited to 25 students. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 2 **W**—4:30-8:30, StP Campus Gym 107, Stern

***PE 5700 WORKSHOP: DANCE IN EDUCATION.** This offering for 4 degree credits (maximum 12 cr) \$60.

History, principles, instructional techniques and materials for teaching dance in schools and recreational agencies. (**Focus this offering: Modern Dance technique, improvisation and composition, beginner and intermediate**) (No prereq. Limited to 25 students. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 3 **T**—4:30-8:30, NGW Dance Studio, Rice

***PE 5700 WORKSHOP: DANCE IN EDUCATION.** This offering for 4 degree credits (maximum 12 cr) \$60.

History, principles, instructional techniques and materials for teaching dance in schools and recreational agencies. (**Focus this offering: Teaching of Folk Dance**) (No prereq. Limited to 25 students. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 4 **W**—4:30-8:30, StP Campus Gym 107, Stern

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physical education and recreation

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.

All activities courses may be taken S-N.

Activities Open to Men and Women

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***PE 1035 KARATE.** 1 degree credit, \$14 plus \$3 course fee. **Total \$17.**

Emphasis on learning basic stances, blocks, and attacks in addition to hand and foot techniques and practice in first form. (No prereq. Limited to 25 students)

Fall Qtr Sec 1 T—7-9:00, Stad 264, Neff

***PE 0250 SWIMMING FOR MEN AND WOMEN.** No credit, \$42 plus \$3 course fee. **Total \$45.**

Class and individual instruction for beginners in all swimming strokes and in diving. (No prereq. Limited to 20 students)

Sp Class Mar 31-June 9 Sec 1 M—8-9:00, CH, LaPoint

***PE 0255 SCUBA FOR MEN AND WOMEN.** No credit, \$42 plus \$3 course fee. **Total \$45.**

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)

Sp Class April 2-June 11 Sec 1 W—7:30-9:30, CH, Mowerson

Activities Open to Women

***PE 0200 GOLF FOR WOMEN.** No credit, \$28 plus \$3 course fee. **Total \$31.**

The fundamentals of golf. Development of a swing pattern and putting stroke. All sessions will be held in Norris Gymnasium. (No prereq. Limited to 20 students)

**Sp Class April 3-June 12 Sec 1 Th—6-7:00, NGW 60, Tennessean
Sec 2 Th—7-8:00, NGW 60, Tennessean**

Activities Open to Men and Boys.

***PE 0150 GOLF FOR MEN AND BOYS.** No credit, \$28 plus \$3 course fee. **Total \$31.**

The fundamentals of golf. Open to adult men and all junior and senior high school boys 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)

Sp Class Mar 31-June 11

**Sec 1 M—6-7:00, South Tower Stadium, LaPoint
Sec 2 M—7-8:00, South Tower Stadium, LaPoint
Sec 3 W—6-7:00, South Tower Stadium, Anderson
Sec 4 W—7-8:00, South Tower Stadium, Anderson**

Activities Open to Boys and Girls

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, \$21 plus \$3 course fee. **Total \$24.**

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

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

physical education and recreation—physics

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)

Sp Class April 5-June 14

BEGINNERS

Sec 1 **S**—8:45-9:30 a.m., NGW 51, Lampe

Sec 2 **S**—9:30-10:15 a.m., NGW 51, Lampe

INTERMEDIATES

Sec 3 **S**—8:45-9:30 a.m., CH, Mowerson

Sec 4 **S**—9:30-10:15 a.m., CH, Mowerson

COMPETITIVE TECHNIQUES

Sec 5 **S**—10:15-11:00 a.m., CH, Mowerson

***PE 0100 SPRINGBOARD DIVING FOR BOYS AND GIRLS.** No credit, \$21 plus \$3 course fee. **Total \$24.**

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. Limited to 12 students)

Sp Class Sept 28-Dec 7

Sec 1 **S**—9:45 a.m., CH, Lincoln

Sec 2 **S**—10-10:45 a.m., CH, Lincoln

physical medicine and rehabilitation (PMed)

(See also Anatomy)

A. Joy Huss, Assistant Professor of Physical Medicine and Rehabilitation

***PMed 5182 FUNCTIONAL NEUROANATOMY AND NEUROPHYSIOLOGY.** 3 degree credits. \$45 plus \$4 course fee. **Total \$49.**

A study of the neuroanatomic structures as functional systems and the basic neurophysiologic concepts with emphasis on application for understanding and treating physical dysfunction. (Prereq Occupational Therapist, Physical Therapist, Speech Therapist or \bar{t} . Limited to 50 students. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **T**—6:20-8:50, ChRC 208, Huss

physics (Phys)

Hans Courant, Professor of Physics

Carl H. Poppe, Associate Professor of Physics

Peter Roll, Associate Professor of Physics

Walter Weyhmann, Associate Professor of Physics

Phys 1031-1032 INTRODUCTORY PHYSICS: MEASUREMENT AND APPLICATIONS.

5 degree credits each semester, \$70 plus \$10 special fee. **Total \$80** each semester. (♦ \$35 plus \$10 special fee. Total \$45 each semester) ★

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

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

physics

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.), Poppe

Spring Sem 1032 Sec 2 T—6-8:30, Ph 133 (lab hours arr.), Poppe

Phys 1271 GENERAL PHYSICS. 4 degree credits, \$56. (♦ \$28)

Classical 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—6-9:00, Ph 170

Phys 1275 GENERAL PHYSICS LABORATORY. 1 degree credit, \$14 plus \$10 course fee. **Total \$24.**

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, \$56. (♦ \$28)

Fluid mechanics, heat and electricity. (Prereq 1271 and Math 1231 or ¶1231 or equiv)

Spring Sem Sec 1 T—6-9:00, Ph 170

Phys 1285 GENERAL PHYSICS LABORATORY. 1 degree credit, \$14 plus \$10 course fee. **Total \$24.**

Laboratory exercises in electricity. (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, \$56.

Magnetism, optics. (Prereq 1281; may be taken with or without Phys 1295 lab)

Fall Sem Sec 1 T—6-9:00, Ph 166, Courant

Phys 1295 GENERAL PHYSICS LABORATORY. 1 degree credit, \$14 plus \$10 course fee. **Total \$24.**

Laboratory exercises in magnetism and optics. (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 3501 MODERN PHYSICS FOR ENGINEERS. 4 degree credits. **To be offered 1975-76.**

Phys 3505 MODERN PHYSICS LABORATORY. 1 degree credit. **To be offered 1975-76.**

Phys 3801 INTRODUCTION TO THE PHYSICS OF PHOTOGRAPHY. 5 degree credits, \$70 plus \$10 course fee. **Total \$80.** (♦ \$35 plus \$10 course fee. Total \$45)

Principles of optics and electricity applied to the photographic processes. Image formation; intensity and color of illumination; exposure of photographic materials. Emphasis on understanding technical literature as applied to pictorial photography (or tone reproduction) though with some discussion of line reproduction. (Prereq HS algebra, some photographic experience)

Fall Sem Sec 1 W—6-8:30, Ph 166, Weyhmann (2 additional hrs per wk arr.)

(See also Studio Arts)

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

physics—plant pathology

Phys 5090 PHYSICS OF MUSICAL INSTRUMENTS. 3 degree credits, \$MuEd 5750. \$45.

Seminar on physical characteristics and processes involved in playing musical instruments. Emphasis on non-mathematical understanding, to improve performance and teaching skills. Electronic methods to sense and display cues to assist performance and teaching. (Prereq fl. Qualified students may register for graduate credit except in the major field)

Spring Qtr Sec 1 **W**—6:20-9:30, Ph 133, Roll

(See also Music and Music Education)

Phys 5094 PHYSICAL ACOUSTICS OF MUSIC. 3 degree credits, \$5091. \$45.

Principles of physics and acoustics as they relate to musical sounds, musical instruments, and the electronic production and reproduction of musical sounds. (Prereq 1 yr HS algebra and upper division or graduate standing in Mus or MuEd, or equiv. background in music theory and practice or ‡. Qualified students may register for graduate credit at the University of Minnesota, except in the major field)

Fall Qtr Sec 1 **W**—6:20-9:30, Ph 133, Roll

Phys 5095 PHYSICAL ACOUSTICS OF MUSIC LABORATORY. 1 degree credit, \$15 plus \$10 course fee. **Total \$25.**

Laboratory to accompany 5094. Aimed at developing a practical understanding of the physical qualities and phenomena associated with music, and how to measure and observe them; and at developing some skill and understanding of the operation and use of certain electronic devices used in music today. (Prereq ‡. Qualified students may register for graduate credit except in the major field)

Winter Qtr Sec 1 (2 hrs per wk arr. with instructor), Roll

physiology

(See GC 1132, Human Anatomy and Physiology [Natural Science])

plant pathology (PIPa)

(See also Horticulture)

William W. Kennedy, Professor of Plant Pathology

David H. MacDonald, Associate Professor of Plant Pathology

***PIPa 1001 INTRODUCTORY PLANT PATHOLOGY.** 5 degree credits, \$5002, 5050. \$70.

An introduction to the characteristics of and the effects produced by the most important biotic and abiotic causes of plant diseases as well as a study of representative diseases that are of significance in Minnesota. (Prereq 9 cr plant science. Meets concurrently with 5002. Limited to 15 students)

Fall Qtr Sec 1 **MW**—6:30-9:30, StakH 103, 105, StP Campus, MacDonald

Spring Qtr Sec 2 **MW**—6:30-9:30, StakH 103, 105, StP Campus, MacDonald

***PIPa 5002 INTRODUCTORY PLANT PATHOLOGY FOR ADVANCED STUDENTS.** 3 degree credits, \$1001, 5050. \$45.

See course description for 1001. (Prereq 9 cr plant science. Meets concurrently with 1001. Qualified students may register for graduate credit at the University of Minnesota. Limited to 10 students)

Fall Qtr Sec 1 **MW**—6:30-9:30, StakH 103, 105, StP Campus, MacDonald

Spring Qtr Sec 2 **MW**—6:30-9:30, StakH 103, 105, StP Campus, MacDonald

PIPa 5702 PREVENTION AND CONTROL OF PLANT DISEASE. 3 degree credits, \$45. (♦ \$27.50)

Emphasis will be placed on three areas: 1) survey and evaluation of control methods (biological, chemical, regulatory—including changes imposed by the

See symbols, page 33.

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plant pathology—political science

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 $\frac{1}{2}$. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 T—6:20-8:50, StakH 103, StP Campus, Kennedy

political science (Pol)

(See also GC 1222, Practical Politics [Social Studies])

Charles Backstrom, Professor of Political Science
Terence W. Ball, Assistant Professor of Political Science
Roger W. Benjamin, Associate Professor of Political Science
Richard N. Blue, Assistant Professor of Political Science
Virginia Gray, Assistant Professor of Political Science
P. Terrence Hopmann, Associate Professor of Political Science
Samuel H. Kernell, Instructor in Political Science
August H. Nitz, Jr., Assistant Professor of Political Science
Robert E. Riggs, Professor of Political Science
Thomas M. Scott, Associate Professor of Political Science
L. Earl Shaw, Assistant Professor of Political Science
John E. Turner, Professor of Political Science
Gary 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.

Pol 1001 AMERICAN GOVERNMENT AND POLITICS. 5 degree credits, \$70. (♦ \$35) ★

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 Sem Sec 1 M—7-9:15, BlegH 145, Backstrom

Sec 2 T—7-9:15, Rich HS 220

Winter Qtr Sec 3 MW—7:20-9:00, BlegH 135, Nitz

Spring Qtr Sec 4 TTh—7:20-9:00, BlegH 130, Kernell

Pol 1025 WORLD POLITICS. 4 degree credits, \$56. (♦ \$28) ★

Introduction to contemporary international relations, forms of state interaction; problems of conflict and cooperation. (No prereq)

Fall Qtr Sec 1 Th—6:20-8:50, BlegH 130, Hopmann

Spring Qtr Sec 2 W—6:20-8:50, BlegH 110, Blue

Pol 1026 AMERICAN FOREIGN POLICY. 4 degree credits, \$56. (♦ \$28) ★

Introduction to institutions and processes which determine American foreign policy. (No prereq)

Winter Qtr Sec 1 Th—6:20-8:50, BlegH 215, Riggs

Pol 1031 AMERICAN PUBLIC POLICY. 4 degree credits, \$56. (♦ \$28) ★

Analysis of several major public policy issues such as: social welfare policy,

See symbols, page 33.

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political science

education policy, economic policy, national security policy. Emphasis upon forces molding and impact of public choices. (No prereq)

Winter Qtr Sec 1 M—6:20-8:50, BlegH 130, Gray

Pol 1051 INTRODUCTION TO POLITICAL ANALYSIS. 5 degree credits. To be offered 1975-76.

Pol 5308 LEGISLATIVE PROCESS. 4 degree credits, \$60. (♦ \$30)

The American Congress and state legislatures; internal organization: the committee system, party leadership, relationships with executives and administrative agencies; legislative policy-making; interest group, party, and constituency influences on the legislative process. (No prereq. Qualified students may register for graduate credit at the University of Minnesota, except in the major field)

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

Pol 5328 METROPOLITAN GOVERNMENT AND POLITICS. 4 degree credits, \$60. (♦ \$30)

Analysis of contemporary metropolitanism; development and definition of major metropolitan problems; governmental-political responses to such problems, including development of federal and state programs; discussion of the politics of metropolitan reform efforts. (No prereq. Qualified students may register for graduate credit at the University of Minnesota, except in the major field)

Winter Qtr Sec 1 T—6:20-8:50, BlegH 245, Scott

Pol 5443 GOVERNMENT AND POLITICS OF THE SOVIET UNION. 4 degree credits, \$60. (♦ \$30)★

Analysis that seeks to explain the rise of Bolshevism; sources and nature of Bolshevik ideology; history and institutional character of the Soviet regime; sources of power; role of the Party and functional groups; patterns of change. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 61]. May not be taken for graduate credit)

Fall Qtr Sec 1 W—6:20-8:50, BlegH 155, Turner

Pol 5455 LATIN AMERICAN GOVERNMENT AND POLITICS. 5 degree credits, \$75. (♦ \$37.50)

General analysis of Latin American political heritage, political processes, and contemporary public policy issues; examination of selected countries with emphasis on their resolution of the problems of social, economic, and political change. (No prereq. Qualified students may register for graduate credit at the University of Minnesota, except in the major field)

Winter Qtr Sec 1 W—6:20-8:50, BlegH 440, Wynia

Pol 5659 AMERICAN POLITICAL THOUGHT. 4 degree credits, \$60. (♦ \$30)

From colonial times to present: Puritanism, Constitution; utopianism; Calhoun; history of anarchist, socialist, populist and syndicalist thought; social Darwinism, conservatism; political thought in law and literature. (No prereq. Qualified students may register for graduate credit at the University of Minnesota, except in the major field)

Spring Qtr Sec 1 T—6:20-8:50, BlegH 220, Ball

Pol 5663 POLITICAL THEORY AND UTOPIA. 4 degree credits, \$60. (♦ \$30)

Selected great utopias from viewpoint of political theorist; idea of planning an ideal state; achievement of utopia; stability and change in great utopias; problem of authority and law; anarchist, socialist, and conservative utopia. (No prereq. Qualified students may register for graduate credit at the University of Minnesota except in the major field)

Fall Qtr Sec 1 T—6:20-8:50, BlegH 230, Benjamin

Pol 5737 POLITICAL PARTIES. 4 degree credits. To be offered 1975-76.

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See building abbreviations, page 324; see department abbreviations, page 331.

psychological foundations

psychological foundations (PsyF)

(See also Education)

Douglas H. Anderson, Associate Professor of Educational Psychology

William M. Bart, Associate Professor of Educational Psychology

David W. Johnson, Professor of Educational Psychology

E. Gary Joselyn, Associate Professor of Educational Psychology

James R. Rest, Assistant Professor of Educational Psychology

S. Jay Samuels, Professor of Educational Psychology

John Stecklein, Professor of Educational Psychology

Martin Wong, Assistant Professor of Educational Psychology

S-N registration not permitted in Psychological Foundations unless specifically indicated in course description.

PsyF 5110 INTRODUCTORY STATISTICAL METHODS. 3 degree credits, \$45.

Basic statistical techniques; comprehension of literature using elementary concepts and methods. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 Th—6:20-8:50, Bu 125, Stecklein

Spring Qtr Sec 2 Th—6:20-8:50, Bu 125, Stecklein

PsyF 5120 EDUCATIONAL MEASUREMENT IN THE CLASSROOM. 3 degree credits, \$45.

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. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 MW—4:15-6:00, CD 218, Joselyn

PsyF 5141 PSYCHOLOGY OF SCHOOL LEARNING. 3 degree credits, \$45.

Survey of psychological conceptions of the learner, the schooling process, and the implications of these conceptions for education. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 T—4:15-6:00, NH 216, Bart

PsyF 5148 PSYCHOLOGY AND PEDAGOGY OF READING. 3 degree credits, \$45.

Physiological, psychological, and linguistic factors influencing beginning and fluent reading and their implications for instruction. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 W—4:30-6:30, Bu 125, Samuels

PsyF 5162 PERSONALITY AND SOCIAL DEVELOPMENT. 3 degree credits, \$5160. \$45.

Major concepts and research findings in adjustment and development with special emphasis on educational implications. (Prereq 5 cr in introductory psychology. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 W—6:20-8:50, Bu 120, Rest

PsyF 5170 SOCIAL PSYCHOLOGY OF EDUCATION. 4 degree credits, \$60.

Concepts and theories in the field applied to educational problems and settings. Laboratory sessions to make applications and develop skills in group behavior. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 TTh—4:30-6:30, Jones 4, Johnson

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.



PayF 5176 PSYCHOLOGY OF DRUG ABUSE

A series of 10 half-hour television broadcasts examining the psychological and sociological problems of drug abuse with special reference to schools, teachers and students.

Program Titles: Drugs and the Schools; Drug Use and Abuse Patterns; Personal Values and Drug Abuse; Drug Education-Alternatives; Sociological Causes of Drug Use; Drug Education—Attitudes, Laws, Detection and Crisis Intervention; Street and Referral Agencies; Chemical Dependency; Rehabilitation.

● **CREDIT REGISTRATION**

3 degree credits, \$45 plus \$5 special fee (study guide). **Total \$50** (texts extra). In addition to viewing the television broadcasts, registrants will be expected to complete assigned readings, projects and written assignments, and a take-home final examination. Students will also have opportunities to phone in questions and listen to a follow-up radio feedback session. Students may take the course individually or form groups for discussions. If a student registers individually, he will be expected to maintain a personal journal of thoughts, attitudes and criticisms related to the course for submission to the instructor (in lieu of a group meeting).

Students who form groups of 3 or more members (such as teachers in a school, or wherever there are three students in the same area) may complete projects and written assignments as a group. When a group is formed, a coordinator should be nominated who will then contact the instructor to give him the names and addresses of students in his group. (Instructor: Prof. Martin Wong, 330 Burton Hall, University of Minnesota, Mpls. MN 55455 [376-3204]). The study guide will be mailed upon registration. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

● **STUDY GUIDE ONLY**

For home viewers who do not wish to register for credit but want to follow the television lectures, a study guide may be purchased from Extension Classes for \$5.

● **MATERIALS**

Textbooks: *Drugs in the Classroom*, H. J. Cornacchia, D.J. Bentel and D.E. Smith; *The Natural Mind*, A. Weil; *Mystification and Drug Misuse*, H. L. Lennard. Books may be purchased in person or by mail from the Harold Smith West Bank bookstore. See **bookstores**, page 24 and maps, page 325.

Fall Qtr Sec 1 T—7:30-8:00, KTCA-TV, Channel 2, St. Paul-Minneapolis,
 7:30-8:00, WDSE-TV, Channel 8, Duluth,
 7:30-8:00, KWCM-TV, Channel 10, Appleton,
 7:30-8:00, KFME-TV, Channel 13, Fargo-Moorhead, Wong

PayF 5330 COMPUTER PROGRAMMING. 3 degree credits, \$45.

Computer as a tool for research in the behavioral sciences; computer systems, language and the development of specific programs that demonstrate computer characteristics, laboratory experience. (Prereq senior. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 M—6:20-8:50, Bu 125, Anderson

psychology

(See also Adult Psychiatry, Child Psychology, Counseling and Student Personnel Psychology and Psychological Foundations)

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

psychology

Mary J. Bradshaw, Instructor in Psychology

John C. Buchanan, Lecturer in Psychology

Barbara Dorset, Instructor in Psychology

Paul W. Fox, Professor of Psychology

Mary Ann Graff, Instructor in Psychology

James C. Kincannon, Lecturer in Psychology

Leslie A. King, Professor of Psychological Studies

Grove P. Laybourn, Jr., Lecturer in Psychology

Mary Ann Mattoon, Lecturer in Psychology

Joel Meresman, Instructor in Psychology

Thomas Monson, Instructor in Psychology

Beverly Oliphant, Instructor in Psychology

Frankie Mae Paulson, Instructor in Psychology

Roy W. Pickens, Professor of Psychology

Jane Rozsnafszky, Instructor in Psychology

Vera M. Schletzer, Professor of Psychology

Glenna Schroeder, Instructor in Psychology

John C. Vaughn, Teaching Associate in Psychology

Orville L. Weiszhaar, Research Assistant in Psychology

Psy 1001 GENERAL PSYCHOLOGY. 5 degree credits, \$70. (◆\$35)★

This course is designed to orient the student to the whole field of psychology. Its emphasis is upon methods of investigating human behavior. Required for most other courses in psychology. (No prereq)

Fall Sem Sec 1 **M**—7-9:30, Bu 120

Sec 2 **T**—6:20-8:55, NH 211

Sec 3 **W**—6:30-9:05, NH 213

Sec 4 **W**—7-9:35, Kel HS 111 (Limit 60 students*)

Sec 5 **Th**—7-9:35, Sand JHS 209 (Limit 35 students*)

Spring Sem Sec 6 **M**—6:20-8:55, NH 211

Sec 7 **W**—6:20-8:55, NH 211

Psy 1003 APPLICATION OF PSYCHOLOGY TO LIVING. 4 degree credits, \$56. (◆\$28)

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, NH 211, Weiszhaar

Sec 2 **Th**—6:20-8:50, Elim Church, room 205, 40th & Broadway,
Th Robbinsdale; Paulson

Sec 3 **S**—9-11:30 a.m., NH 213, Meresman

Fall Sem Sec 4 **Th**—8:15-9:55, NH 213, King

Winter Qtr Sec 5 **T**—6:20-8:50, NH 213, Graff

Sec 6 **W**—7-9:30, Mtka HS 119, Schletzer

Spring Sem Sec 7 **Th**—8:15-9:55, NH 213, Rozsnafszky

Spring Qtr Sec 8 **W**—7-9:30, Rich HS 341, Dorset (Limit 50 students*)

*Psy 1004-1005† INTRODUCTORY LABORATORY PSYCHOLOGY. 3 degree credits each quarter, \$42 plus \$14 special fee plus \$1.50 course fee. Total \$57.50 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)

See symbols, page 33.

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Fall Qtr 1004 Sec 1 **W**—6:20-8:50, EItH 50-60, Fox
 Sec 2 **Th**—6:20-8:50, EItH 50-60, Fox
Winter Qtr 1005 Sec 3 **W**—6:20-8:50, EItH 50-60, Fox
 Sec 4 **Th**—6:20-8:50, EItH 50-60, Fox

Psy 1911 PSYCHOLOGY AND RELIGION. 4 degree credits, \$56. (◆\$28)

Major theoretical statements on religion. Development of the religious sentiment. Religious experience. Pathological and self-actualizing religion, according to major theoretical positions. Assessment of religious behavior and religiousness. (No prereq)

Fall Qtr Sec 1 **M**—6:20-8:50, ForH 105, Bradshaw

Psy 3011 INTRODUCTION TO THE PSYCHOLOGY OF LEARNING. 4 degree credits, \$56. (◆\$28)

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 **T**—6:20-8:50, EItH N119

Spring Qtr Sec 2 **T**—6:20-8:50, EItH N119

***Psy 3031 SENSATION AND PERCEPTION.** 4 degree credits, \$56.

Roles of stimulus, receptor organ and brain, and of learning and motivation, in man's perception of his world. Lectures and demonstrations. (Prereq 1001, 1004 or §. Limited to 40 students)

Spring Qtr Sec 1 **M**—6:20-8:50, EItH 150-160

Psy 3051 INTRODUCTION TO COGNITIVE PSYCHOLOGY. 4 degree credits, \$56. (◆\$28)

Discussion of basic research problems and theoretical concepts in the study of cognitive factors in perception and memory. (Prereq 1001 and 1005 or fl1005)

Spring Qtr Sec 1 **W**—6:20-8:50, ForH 130

Psy 3101 INTRODUCTION TO PERSONALITY. 4 degree credits, \$56. (◆\$28)★

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 Sem Sec 1 **W**—6:20-8:00, WuH 130, Schroeder

Spring Sem Sec 2 **W**—6:20-8:00, WuH 130, Oliphant

Psy 3124 PSYCHOLOGY OF INDIVIDUAL DIFFERENCES. 4 degree credits, \$56. (◆\$28)

The differential method as a means for studying human behavior, impact and importance of individual differences in modern society, instruments of measurement and behavior prediction in differential psychology and the major determiners of individuality. (Prereq 3801)

Spring Sem Sec 1 **Th**—8:15-9:55, WuH 130

Psy 3201 INTRODUCTION TO SOCIAL PSYCHOLOGY. 4 degree credits, \$56. (◆\$28)

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 Sem Sec 1 **M**—8:15-9:55, EItH N119, Monson

Spring Sem Sec 2 **M**—8:15-9:55, EItH N119, Monson

Psy 3604 INTRODUCTION TO ABNORMAL PSYCHOLOGY. 4 degree credits, \$56. (◆\$28)★

The field of abnormal psychology. Etiologies of behavior disorders; discussion of available treatments. (Prereq 1001)

Fall Sem Sec 1 **M**—6:20-8:50, WuH 130

Spring Sem Sec 2 **M**—6:20-8:50, WuH 130

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

psychology

Psy 3801 INTRODUCTION TO STATISTICAL METHODS. 4 degree credits, \$Soc 3801. \$56.

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 Sem Sec 1 Th—8:15-9:55, BlegH 205

Spring Sem Sec 2 Th—6:20-8:00, BlegH 150

Psy 3911 PERSONALITY AND RELIGION. 4 degree credits, \$56. (◆\$28)

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 §)

Spring Qtr Sec 1 W—6:20-8:50, EltH N119, Bradshaw

(See other courses relating to religion, page 181)

Psy 5017 ANALYSIS OF BEHAVIOR I. 4 degree credits, \$60. (◆\$30)

Systematic formulation of topics of psychology based upon a Skinnerian analysis. Scientific method, learning, motivation, and emotion. (Prereq 3011 except for students in Honors sequence and grads. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 Th—6:20-8:50, NH 107, Vaughn

Psy 5044 PSYCHOLOGY OF MOTIVATION AND CONFLICT. 4 degree credits, \$60. (◆\$30)

The drives and motives which underlie normal behavior and the forms of adjustment which arise when motives conflict or encounter external frustration. Parallel observations in the field of animal behavior will be considered. (Prereq 1001. Qualified students may register for graduate credit at the University of Minnesota)

Fall Sem Sec 1 Th—8:15-9:55, BuH 123

Spring Sem Sec 2 Th—8:15-9:55, EltH N119

Psy 5054 PSYCHOLOGY OF LANGUAGE. 4 degree credits, \$60. (◆\$30)

The theories and experimental evidence involved in past and present conceptions of psychology of language. Lectures and small group discussions. (Prereq Ling 1001 or 3001 or Psy 3011 or equiv. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 T—6:20-8:50, EltH N119

Psy 5105 THE ANALYTICAL PSYCHOLOGY OF C.G. JUNG. 4 degree credits, \$60. (◆\$30)

Major Jungian psychological theories: extraversion-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)

Fall Qtr Sec 1 T—6:20-8:50, NH 213, Mattoon

Psy 5106 ADVANCED ANALYTICAL PSYCHOLOGY. 4 degree credits, \$60. (◆\$30)

Critical evaluation of selected topics of the Psychological theories developed by C.G. Jung. (Prereq 5105 or equiv. 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, \$60. (◆\$30)

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. Limited to 50 students. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 T—6:20-8:50, WuH 130, Schletzer

(See other courses related to Women's Studies, page 174)

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psychology—public affairs

Psy 5501 VOCATIONAL PSYCHOLOGY. 4 degree credits, \$60.

Analysis of individuals and work environments with reference to selection of, adjustment to, and behavior in work; history, theories, and current developments in vocational psychology. (Prereq 3801 or equiv. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **T**—6:20-8:50, Bu 123

Psy 5751 PSYCHOLOGY OF ADVERTISING. 4 degree credits, \$Jour 5251, \$60.

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)

Spring Sem Sec 1 **Th**—6:20-8:00, Jones 4, Laybourne

For information on non-credit workshops or conferences in psychology, please contact the Department of Conferences, 131 Nolte Center for Continuing Education; telephone 373-3151.

public affairs (PA)

(See also Public Policy)

Dean E. Abrahamson, Professor of Public Affairs
Nancy N. Anderson, Associate Professor of Public Affairs
John E. Brandl, Director, School of Public Affairs
Donald Geesaman, Associate Professor of Public Affairs
Michael E. Gleeson, Assistant Professor of Public Affairs
Walter W. Heller, Regents Professor of Economics
Stephen Hoenack, Associate Professor of Public Affairs
Robert T. Kudrle, Assistant Professor of Public Affairs
John E. Seley, Assistant Professor of Public Affairs

***PA 3960 THE ENERGY CRISIS I (SELECTED TOPICS IN PUBLIC AFFAIRS).** 4 degree credits, \$56.

Discussion and analysis of what has come to be called the "energy crisis." Basic data on energy supply and demand, alternative energy sources, opportunities for energy conservation, environmental and social implications of alternative energy policies, and other related issues. Particular attention will be given to current energy issues and to energy policy questions relating directly to Minnesota. (No prereq. Limited to 50 students)

Fall Qtr Sec 1 **M**—6:20-8:50, BlegH 125, Abrahamson

***PA 3960 THE ENERGY CRISIS II (SELECTED TOPICS IN PUBLIC AFFAIRS).** 4 degree credits, \$56 plus \$5 course fee. **Total \$61.**

A more detailed analysis of alternative energy policies than is presented in The Energy Crisis I (fall quarter). Examination of supply and demand oriented energy policies and contrasts between these two approaches. Particular attention will be given to current energy issues and to energy policy questions which relate directly to Minnesota. (Prereq 3960 recommended. Limited to 50 students)

Winter Qtr Sec 1 **M**—6:20-8:50, AndH 330, Abrahamson

NEW

NEW

public affairs

PA 5161 TECHNOLOGY PLANNING. 4 degree credits, \$60 plus \$5 course fee. Total \$65.

The pervasive involvement of technology with economic and political institutions will be described. Contemporary technological controversies will be examined, along with the adequacy of existing tribunals, and the policy dilemmas posed by these technologies. Representative examples will be chosen from various technologies—medical, communication, energy, etc.—but process rather than substance will be stressed in their discussion. Readings for the course will be chosen from the writings of authors such as Boulding, Thompson, Heilbroner, Galbraith, Sax and Ellul. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **W**—6:20-8:50, BlegH 260, Geesaman

***PA 5516-5517 SEMINAR: SOCIAL THEORY AND SOCIAL PLANNING I, II.** 4 degree credits each quarter, \$60 each quarter.

A description and discussion of major issues in social theory; and analysis of urban planners' responses—implicit and explicit—to these issues. Includes consideration of social change, alienation and anomie, power, images of society, values and objectivity; with specific examples from urban planning. What the planner can, cannot, has, and has not done in regard to social problems. (Prereq § for 5516; 5516 for 5517. A joint DAY/Extension course limited to 8 Extension students. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr 5516 Sec 1 **W**—2:15-5:00, SocSci 860, Seley

Spring Qtr 5517 Sec 2 **T**—2:15-5:00, SocSci 860, Seley

***PA 5550 PLANNING PROSEMINAR.** 2 degree credits, \$30.

Analysis and discussion of major sub-areas of planning (e.g., social planning, planning theory). Topics differ from quarter to quarter. (Prereq §. A joint Day/Extension course limited to 8 Extension students. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **W**—3:15-5:00, BlegH 335, Seley

***PA 5550 REGIONAL PLANNING.** Spring Qtr. 373-3195.

***PA 8201-8202 POLICY ANALYSIS I, II.** 6 degree credits per quarter, \$96 per quarter.

Microeconomic analysis of public policy in political and social context. Cost-effectiveness and cost-benefit analysis and their role in the process of policy making. (Prereq § for 8201; 8201 and § for 8202. A joint Day/Extension course limited to 8 Extension students. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr 8201 Sec 1 **TTh**—3:15-5:00, BlegH 335, Kudrle

8202 Sec 2 **TTh**—3:15-5:00, BlegH 255, Brandl

***PA 8204 THE PUBLIC ECONOMY.** 3 degree credits, \$48.

Government role in and impact on the economy; determinants of national income, employment, and price level; fiscal and monetary policy. (Prereq §. A joint Day/Extension course limited to 8 Extension students. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **Th**—3:15-5:00, BlegH 335, Heller

***PA 8206 QUANTITATIVE METHODS FOR POLICY ANALYSIS.** 3 degree credits, \$48.

Provides the basic tools for empirical analysis in the evaluation of public policy alternatives. Basic statistics, econometrics, design of experiments, and communication of computers are presented, along with varied examples of the role these techniques can play in public policy decision making. (Prereq §. A joint Day/Extension course limited to 8 Extension students. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **MW**—3:15-5:00, BlegH 255, Hoenack

Spring Qtr Sec 2 **MW**—3:15-5:00, BlegH 255, Hoenack

***PA 8216 POLICY PROCESS I.** 3 degree credits, \$48.

Description and explanation of public rule-making, planning, implementation and review process. Emphasis given to an understanding of the environment

public affairs—public health

of the policy process and to the analysis of mechanisms developed for the implementation of public policy. (Prereq ‡. A joint Day/Extension course limited to 8 Extension students. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 TTh—3:15-5:00, BlegH 415

*PA 8321 **INTERGOVERNMENTAL ADMINISTRATIVE RELATIONS.** Winter Qtr. 373-3195.

*PA 8330 **INFORMATION AND INCENTIVES FOR IMPROVED DECISION MAKING IN BUREAUS.** 3 degree credits, \$48.

Discussion of the various problems and methods associated with improving the responsiveness of large bureaucracies to the demands of their existing and potential constituencies. One topic emphasized: What is the desirability of using decentralized incentives for improving responsiveness of bureaus to their clients' demands, as opposed to using central directives aimed at achieving the same goal? Consideration given to the problem of designing a management information system to improve decentralized decision-making in large organizations, health care delivery, law enforcement, provision of welfare services. (Prereq ‡. A joint Day/Extension course limited to 8 Extension students. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 T—2:15-4:00, BlegH 360, Hoenack, Anderson, Brandl

*PA 8521 **URBAN DEVELOPMENT.** Fall Qtr. 373-3195.

*PA 8971, 8981, 8991 **INDIVIDUAL READINGS, RESEARCH IN PUBLIC POLICY ANALYSIS, ADMINISTRATION.** Credits arranged. \$16 per credit.

(Prereq ‡. A joint Day/Extension course limited to 8 Extension students. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr 8971 Sec 1 Day, time arr.

Winter Qtr 8981 Sec 2 Day, time arr.

Spring Qtr 8991 Sec 3 Day, time arr.

public health (PubH)

Your attention is called to the Chemical Dependency Counseling Certificate Program, page 80.

Daniel Anderson, Adjunct Associate Professor of Public Health

Dennis A. Armstrong, Instructor and Coordinator, Chemical Dependency Counseling Program

Donald Barber, Associate Professor of Environmental Health

James Boen, Associate Professor of Biometry and Chemical Dependency Counseling Program

Velvl W. Greene, Professor of Environmental Health

Carl B. Heggstad, Professor of Anatomy

Richard O. Heilman, Assistant Professor of Psychiatry and Public Health

James Kincannon, Clinical Assistant Professor of Psychiatry

Edward G. Meads, Instructor, Chemical Dependency Counseling Program

William A. O'Brien, Clinical Associate Professor of Medicine and Associate Professor of Public Health

Harold J. Paulus, Professor of Environmental Health

Gustave L. Scheffler, Assistant Professor of Environmental Health and Safety

Robert W. Schwanke, Assistant Professor of Public Health and Chemical Dependency Counseling Program

Conrad P. Straub, Professor of Environmental Health

PubH 3001 **PERSONAL AND COMMUNITY HEALTH.** 3 degree credits, \$3004. \$42.★

Fundamental principles of health conservation and disease prevention. (No prereq)

Winter Qtr Sec 1 T—7-9:30, Mayo 100, O'Brien

public health

PubH 3005 INTRODUCTION TO ANATOMY AND MEDICAL TERMINOLOGY. 3 degree credits, \$42.

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)

chemical dependency courses

(See also PsyF 5176, Psychology of Drug Abuse television course, page 289)

***PubH 3030 FUNDAMENTAL ASPECTS OF DRUG ABUSE AND DEPENDENCY.** 3 degree credits; \$42.

Lectures and discussions on the nature of the drugs involved; the medical, psychological and social aspects of dependence. (Prereq advance application or \$. Requests for admission should be made to Dennis A. Armstrong, Coordinator [see page 80])

Fall Qtr Sec 1 T—6:30-9:00, Owre 15, Schwanke, Heilman, Armstrong, Anderson

Winter Qtr Sec 2 Th—6:30-9:00, Owre 15

***PubH 3031 THE DISEASE PROCESS AND SOCIAL IMPLICATIONS OF DRUG DEPENDENCY.** 3 degree credits, \$42.

Study of the social and pathological use of drugs by individuals and societies. Historical as well as contemporary usage will be considered. (Prereq 3030 or \$. Requests for admission should be made to Dennis A. Armstrong, Coordinator [see page 80])

Winter Qtr Sec 1 T—6:30-9:00, Owre 15, Armstrong, Heilman, Kincannon, Anderson

Spring Qtr Sec 2 Th—6:30-9:00, Owre 15

***PubH 3032 COUNSELING THE ALCOHOLIC AND OTHER DRUG DEPENDENT PERSONS.** 3 degree credits, \$42.

Individual and group counseling techniques, family counseling as specifically related to drug abuse and its effect on all aspects of a person's life. (Prereq 3031 or \$. Requests for admission should be made to Dennis A. Armstrong, Coordinator [see page 80])

Fall Qtr Sec 1 Th—6:30-9:00, Owre 15, Armstrong, Heilman, Anderson

Spring Qtr Sec 2 T—6:30-9:00, Owre 15, Armstrong, Heilman, Anderson

PubH 3033 FUNDAMENTALS OF ALCOHOL AND DRUG ABUSE. 2 degree credits, \$28.

Lecture, discussion and special readings on the scientific, sociocultural, and attitudinal aspects of alcohol and other drug abuse with special emphasis on the role of education. (Prereq education majors or \$)

Spring Qtr Sec 1 W—6:30-8:30, HS Unit A 2-520, Schwanke

PubH 3034 TOPICS IN ALCOHOL AND DRUG ABUSE. 2-5 degree credits, \$14 per credit.

Selected readings in alcohol and drug abuse with discussion based on these readings. (Prereq \$)

Fall Qtr Sec 1 Time arr. Schwanke, Armstrong, Meads

Winter Qtr Sec 2 Time arr. Schwanke, Armstrong, Meads

Spring Qtr Sec 3 Time arr. Schwanke, Armstrong, Meads

PubH 3035 INTERNSHIP IN ALCOHOL AND DRUG ABUSE. 2-9 degree credits, \$14 per credit.

(Prereq 3032 and \$)

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

Fall Qtr Sec 1 Time arr. Meads
Winter Qtr Sec 2 Time arr. Meads
Spring Qtr Sec 3 Time arr. Meads

PubH 3036 BASIC HELPING SKILLS. 4 degree credits, \$56.

Combines lecture, small groups, role playing, and modeling to provide background in skills required to establish effective helper-helpee relationships. Emphasis is on learning and practicing basic interpersonal skills found to be critical in helping other people. (Prereq 3030 and §)

Fall Qtr Sec 1 Time arr. Armstrong, Meads
Winter Qtr Sec 2 Time arr. Armstrong, Meads
Spring Qtr Sec 3 Time arr. Armstrong, Meads

***PubH 5034 TOPICS IN ALCOHOL AND DRUG ABUSE.** 2-5 degree credits, \$15 per 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 Robert W. Schwanke [Public Health, 1325 Mayo, University of Minnesota, Minneapolis 55455]. Qualified students interested in graduate credit should inquire at time of registration)

Fall Qtr Sec 1 Time arr. Schwanke, Boen
Winter Qtr Sec 2 Time arr. Schwanke, Boen
Spring Qtr Sec 3 Time arr. Schwanke, Boen

***PubH 5036 GROUP COUNSELING TECHNIQUES RELATED TO CHEMICAL DEPENDENCY TREATMENT.** 3 degree credits, \$45.

The course's primary focus will be on the small group and the role it plays on the recovery process. The course will utilize specialized readings, group interaction, and video taping. (Prereq 3035 or completed internship and §. Requests for admission should be made to Dennis A. Armstrong, Coordinator [see page 80]. Qualified students interested in graduate credit should inquire at time of registration)

Fall Qtr Sec 1 Time arr.
Winter Qtr Sec 2 Time arr.
Spring Qtr Sec 3 Time arr.

environmental health courses

(See other environment courses, page 171).

PubH 5151 ENVIRONMENTAL HEALTH. 3 degree credits, \$45.

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 1210, Straub

***PubH 5159 SEMINAR: ENVIRONMENTAL HEALTH.** 1 degree credit.

To be offered Spring Quarter, 1976 and alternate years thereafter. (Prereq §).

PubH 5171 ENVIRONMENTAL MICROBIOLOGY. 3 degree credits, \$45.

Survival, dissemination, transportation, and significance of microorganisms in the environment; application of principles to environmental health problems. Offered alternate years. (Prereq 5151, MicB 3101 or §. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 Time arr.

(See also Microbiology)

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

public health—public policy

PubH 5181 INTRODUCTION TO AIR POLLUTION PROBLEMS. 3 degree credits, \$45.

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**—6:20-8:00, Mayo 1250, Paulus

PubH 5182 AIR POLLUTION CONTROLS AND SURVEYS. 3 degree credits, \$45.

Public health engineering approach to air pollution controls and surveys. (Prereq 5181 or §. Qualified students may register for graduate credit at the University of Minnesota)

Spring Sem Sec 1 **M**—6:20-8:00, Mayo 1250, Paulus

PubH 5190 TOPICS IN INJURY CONTROL. (EMPHASIS THIS OFFERING: HOSPITAL COMPLIANCE WITH OCCUPATIONAL SAFETY AND HEALTH LAWS AND STANDARDS), 3 degree credits, \$45.

Directed readings and reports on selected problem areas in injury control. (Employee programs, practices, and environmental controls required in hospitals and similar health care institutions to comply with federal and state occupational safety and health legislation.) (Prereq §. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **W**—7-9:30, Owre 117, Scheffler

PubH 5201 MEASUREMENT AND APPLICATION OF IONIZING RADIATION. 3 degree credits, \$45.

Introduction to principles of measurement and use of radiative sources; emphasis on health hazards. To be offered alternate years. (Prereq §. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **W**—7-9:30, Mayo 1250, Barber

PubH 5202 ENVIRONMENTAL RADIOACTIVITY. 3 degree credits. **To be offered 1975-76.**

Sources, measurement, evaluation, and control of environmental radioactivity; hazards to general population. To be offered Winter Quarter 1976 and alternate years thereafter. (Prereq §. Qualified students may register for graduate credit at the University of Minnesota)

PubH 5241 ENVIRONMENTAL HEALTH ASPECTS OF WATER SUPPLY. 3 degree credits, \$45.

Role of water in health of man; physical, chemical, and biological characteristics; evaluation of source, treatment, and distribution systems. 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 1220, Straub

PubH 5244 ENVIRONMENTAL HEALTH ASPECTS OF LIQUID WASTE DISPOSAL. 3 degree credits. **To be offered 1975-76.**

Role of liquid wastes in health of man; physical, chemical, and biological characteristics; evaluation of source, treatment, and disposal facilities. To be offered Spring Quarter 1976 and alternate years thereafter. (Prereq §. Qualified students may register for graduate credit at the University of Minnesota)

public policy

For information on non-credit conferences or workshops in Public Policy, please contact William C. Rogers, 306 Westbrook Hall; telephone 373-3709. (See also Public Affairs)

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

quantitative analysis (QA)

David Carlson, Instructor in Quantitative Analysis

Norman Chervany, Associate Professor of Quantitative Analysis

Thomas Hoffmann, Professor of Quantitative Analysis

***QA 1050 ELEMENTARY MANAGERIAL STATISTICS.** 4 degree credits, \$56 plus \$4 course fee. **Total \$60.**

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 1131 or 1141 or λ . Limited to 50 students)

Fall Qtr Sec 1 **M**—5:30-8:50, AndH, Chervany

Sec 2 **T**—5:30-8:50, AndH, Hoffmann

Sec 3 **W**—5:30-8:50, AndH, Carlson

Winter Qtr Sec 4 **M**—5:30-8:50, AndH, Carlson

Sec 5 **W**—5:30-8:50, AndH, Hoffmann

Spring Qtr Sec 6 **M**—5:30-8:50, AndH, Chervany

Sec 7 **W**—5:30-8:50, AndH, Carlson

real estate (RE)

Gerald Carroll, Attorney, Wurst, Bundlie, Carroll & Crouch

Sampson Child, Clifford R. Johnson & Associates

Robert Galush, Twin City Federal Savings and Loan Assoc.

Ernest O. Hartwick, broker, Hartwick Realty, Inc.

Arthur Helland, Vice President, Farmers & mechanics Savings

Clifford Johnson, real estate appraisals, Clifford R. Johnson & Associates

Wayne L. Johnson, Investment Realty Solutions

Ray N. McCloughan, Minnesota State Highway Dept.

Linus F. Munger, Munger Insurance Agency

Lindley S. Omundson, Senior Vice President, The Spring Co.

Kenneth O. Parke, The Crosby Co.

Paul F. Resberg, First National Bank of Minneapolis

Bernard G. Rice, Executive Vice President, Greater Minneapolis Area Board of Realtors, Minnesota Association of Realtors

Peter Roskoe, Associate Professor of Finance and Insurance

Howard Shenehon, Shenehon-Goodlund & Associates, Inc.

Gerald Smedberg, broker, Smedberg, Diebold, Berwyn & Kruger Gallery of Homes

Russell C. Smith, Boblett and Smith, Appraisers

The University of Minnesota cooperates with the Real Estate Boards of St. Paul and Minneapolis and 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, 6101 Wayzata Boulevard, Minneapolis, Minnesota 55416.

As this bulletin goes to press the University of Minnesota, Continuing Education and Extension is working with the Office of the Commissioner of Securities, State of Minnesota to develop a sixty (60) hour course for persons licensed to sell real estate in the State of Minnesota. This course will satisfy the Minnesota Real Estate License Law which requires that a salesperson complete such training within two years of initial licensing.

Further information regarding this course may be obtained by calling Continuing Business Education, 373-3680.

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

real estate—religious studies

RE 0001C FUNDAMENTALS OF REAL ESTATE PRACTICE. 3 certificate credits, \$42.

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. (No prereq. Limited to 75 students)

Fall Sem Sec 1 Th—6:20-8:00, AndH 310, Rice

Spring Qtr Sec 2 W—6:20-8:50, AndH 310, Rice

***RE 0002C PRINCIPLES OF COMMERCIAL AND INDUSTRIAL REAL ESTATE.** 4 certificate credits, \$56.

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—5:30-8:00, Rosko

RE 0004C REAL ESTATE APPRAISAL. 3 certificate credits, \$42.

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—6:20-8:00, AndH 250, Rice

RE 0006C REAL ESTATE FINANCING AND INSURANCE. 3 certificate credits, \$42.

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—6:20-8:00, AndH 370, Rice

real estate law

(See BLaw 0098C page 128)

recreation

(See page 279)

religious studies (REIS)

(See other courses relating to religion, page 181)

Robert F. Spencer, Professor of Anthropology

Robert B. Tapp, Professor of Humanities and Religious Studies

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

religious studies—rhetoric

ReIS 1001 INTRODUCTION TO RELIGIOUS STUDIES. 4 degree credits, \$56. (◆ \$28)

The thought and behavior of religious man from historical and analytical perspectives; the ways in which man is religious. (No prereq)

Winter Qtr Sec 1 T—7-9:30, NH 209, Spencer

ReIS 1031 RELIGIONS OF THE 20th CENTURY WORLD. 4 degree credits, Sindic 1054. \$56. (◆ \$28)

Religions of South and Southeast Asia. (No prereq)

Fall Qtr Sec 1 T—7-9:30, NH 207, Tapp

rhetoric (Rhet)

(Technical Communication Program)

(See also Study Skills, Communication)

James E. Connolly, Professor of Rhetoric

James R. Holloway, Associate Professor of Rhetoric

Richard O. Horberg, Associate Professor of Rhetoric

William M. Marchand, Professor of Rhetoric

Sarah E. McBride, Associate Professor of Rhetoric

Thomas E. Pearsall, Professor of Rhetoric

Starling W. Price, Professor of Rhetoric

Lyman K. Steil, Assistant Professor of Rhetoric

L. David Schuelke, Professor of Rhetoric

***Rhet 1147 EFFICIENT READING.** 3 degree credits in Business Administration, General College, the Institute of Technology, and Agriculture. \$42 plus \$2 special fee. Total \$44. ★

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, Price

Sec 2 T—6:20-8:50, ForH 115, Horberg

Sec 3 W—7-9:30, Rich HS 220, Holloway

Winter Qtr Sec 4 M—6:20-8:50, ForH 115, Price

Sec 5 T—6:20-8:50, ForH 115, Marchand

Sec 6 W—7-9:30, Kel HS 229, Holloway

Spring Qtr Sec 7 M—6:20-8:50, ForH 115, Price

Sec 8 T—6:20-8:50, ForH 115, Marchand

Sec 9 W—6:20-8:50, ForH 115, Pearsall

***Rhet 1226 PARLIAMENTARY PROCEDURE, LEADERSHIP, AND PARTICIPATION.** 3 degree credits, \$42. ★

Individual participation in the creation and development of a functioning organization using the rules of parliamentary procedure as its basis for doing business. Students will also study the history, theories and processes of democratically-oriented organizations. (No prereq. Limited to 25 students)

Winter Qtr Sec 1 T—6:20-8:50, ForH 120, Connolly

***Rhet 3257 SCIENTIFIC AND TECHNICAL SPEAKING.** 4 degree credits, \$56.

Training for specific speech situations related to technical or scientific topics.

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

rhetoric—salesmanship

NEW
Emphasis on audience analysis and adaptation, techniques of support and visualization, organization for clarity and accuracy, and techniques of interpreting and answering questions. Students will be required to present and evaluate technical and scientific speeches. (Prereq Rhet 1222 or equivalent beginning speech course or §. Limited to 25 students)

Spring Qtr Sec 1 W—6:20-9:20, ForH 120, Connolly

*Rhet 3280 AMERICAN WOMEN COMMUNICATORS. 3 degree credits, \$42.

NEW
Effective communication by American women will be traced historically within particular spheres of influence, and original communications by women (both in print and on tape) will be analyzed for rhetoric used and general effectiveness of the communication. Students will be encouraged to do individual research into special areas of American culture to discover which women were effective in handling communication for specific purposes. (Prereq facility with English composition equal to a college freshman course. Limited to 25 students)

Fall Qtr Sec 1 M—6:20-8:50, ForH 70, McBride

(See other courses related to women's studies, page 174)

*Rhet 5170 MANAGERIAL COMMUNICATIONS. 4 degree credits, \$60.

NEW
Systematic analysis of communication techniques and procedures for the manager. Emphasis is placed on the manager's ability to achieve vertical and horizontal understanding and acceptance. Class activities include reading, guest speakers, and a term project. (No prereq. May not be taken for graduate credit. Limited to 25 students.)

Winter Qtr Sec 1 W—6:20-9:20, ForH 120, Steil

*Rhet 5600 TRANSFER OF TECHNOLOGY. 4 degree credits, \$60.

NEW
Investigation of methods of transferring scientific and technical knowledge and practice from those individuals and organizations who possess it to those who need it. Review of research in diffusion and transfer methods at different technical levels will be conducted. Students will study tools, methodologies, and assessment procedures for an actual program of technical or scientific subject matter. Planning state-of-the-art or frontier technology seminars and impact analyses for scientists, engineers, and/or segments of the public will be required. (Prereq Eng! 3085 or PubH 5070, or §. Limited to 25 students. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 W—6:20-9:20, ForH 120, Schuelke

russian

(See Slavic and East European Languages)

salesmanship (Sal)

Perry Jacobson, Lecturer in Salesmanship

Sal 0001C SALESMANSHIP. 3 certificate credits, \$42. ★

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. Develops confidence, a creative mind, and earning potential through a positive plan of action, using the behavioral science approach to sales. (No prereq)

Fall Qtr Sec 1 M—6:20-8:50, BlegH 135, Jacobson

Winter Qtr Sec 2 T—7-9:30, Kel HS 233, Jacobson (Limit 35 students*)

Spring Qtr Sec 3 M—6:20-8:50, BlegH 210, Jacobson

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

scandinavian languages

Luther Askeland, Assistant Professor of Scandinavian
Anne Lundquist, Instructor in Scandinavian
Roger E. McKnight, Teaching Associate in Scandinavian
William Mishler, Assistant Professor of Scandinavian
Tuulikki Sinks, Teaching Specialist in Finnish

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.-8 p.m., Monday-Thursday; 8 a.m.-6 p.m., Friday; 9 a.m.-3 p.m., Saturday; closed Sunday.

The following non-language classes may be applied toward the CLA foreign language requirement, Route II (see page 61): Scan 1504, 3601, 5601, Phil 5054.

Scan 1504 SCANDINAVIAN IMMIGRANT CULTURE AND ITS BACKGROUND. 4 degree credits, \$56. (♦ \$28)

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 (see page 61). (No prereq)

Fall Qtr Sec 1 T—6:20-8:50, FolH 304, McKnight

Scan 5601 INGMAR BERGMAN IN THE CONTEXT OF MODERN SCANDINAVIAN LITERATURE. 4 degree credits, \$60 plus \$5 course fee. **Total \$65.** (♦ \$30 plus \$5 course fee. Total \$35)

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 (see page 61). (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

finnish (Fin)

Fin 1101-1102 BEGINNING FINNISH. 5 degree credits each semester, \$70 plus \$3 course fee. **Total \$73** each semester. ★ 1101

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. (No prereq for 1101; 1101 for 1102)

Fall Sem 1101 Sec 1 M—6:20-9:05, FolH 109, Sinks

Spring Sem 1102 Sec 2 M—6:20-9:05, FolH 109, Sinks

(See also the Family and its Environment in Finland. **Summer in Finland, 1975.** Page 205)

norwegian (Nor)

Nor 1101-1102 BEGINNING NORWEGIAN. 5 degree credits each semester, \$70 plus \$3 course fee. **Total \$73** each semester. ★ Nor 1101

This course, intended for students who have little or no previous knowledge of Norwegian, stresses spoken Norwegian, but provides, in addition, the

See symbols, page 33.

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scandinavian languages—school health education

essentials of grammar and some practice in simple composition. (No prereq for 1101; 1101 or § for 1102)

Fall Sem 1101 Sec 1 M—6:20-9:05, FolH 305, Mishler

Spring Sem 1102 Sec 2 M—6:20-9:05, FolH 305, Askeland

swedish (Swed)

Swed 1101-1102 BEGINNING SWEDISH. 5 degree credits each semester, \$70 plus \$3 course fee. **Total \$73** each semester. ★ Swed 1101

This course, 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)

Fall Sem 1101 Sec 1 M—6:20-9:05, FolH 207, Lundquist

Spring Sem 1102 Sec 2 M—6:20-9:05, FolH 205, Lundquist

school health education (Hlth)

(See also Education)

Lyle E. Lewis, Lecturer in Health Education

Elizabeth Peterson, Associate Professor of Family Social Science

William L. Yarber, Assistant Professor of Health Education

S-N registration not permitted in School Health Education unless specifically indicated in course description.

***Hlth 5100 DRIVER EDUCATION I.** 4 degree credits, \$60 plus \$12 special fee. **Total \$72.**

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. (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)

Fall Qtr Sec 1 W—7-10:00, Rich HS 116, Lewis

***Hlth 5101 DRIVER EDUCATION II.** 4 degree credits, \$60 plus \$12 special fee. **Total \$72.**

See course description for Hlth 5100. Second of 3 courses to meet Minnesota certification requirements after September 1, 1966 (Prereq 5100. Limited to 32 students. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 W—7-10:00, Rich HS 116, Lewis

***Hlth 5130 SAFETY EDUCATION.** 4 degree credits, \$60.

Scope and nature of the accident problem in our society; study of curricular areas leading to accident prevention. (Prereq senior. Limited to 32 students. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 T—7-10:00, NGW 201, Yarber

Hlth 5350 FAMILY LIFE AND SEX EDUCATION IN ELEMENTARY SCHOOLS. 3 degree credits, \$45.

Research on sexual behavior of the pre-adolescent child; terminology, appropriate content, and effective methods for teaching. (I. Why Sex Education in the Schools? II. Concept of Human Sexuality; III. Development of Values Related to this area; IV. Sexual Structure and Functioning from Conception to Puberty; V. Concepts and Methods, K-3, K-6; VI. Criteria for Selecting Materials.) (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

secondary education—slavic and east european languages

Fall Qtr Sec 1 **M**—4-6:15, Eden Prairie HS, Room 202, 8025 School Rd., Eden Prairie, Peterson

Spring Qtr Sec 2 **M**—4-6:15, Consolidated Elementary School, 409 E. Case, St. Paul, Peterson

HLth 5602 THE DRIVER SIMULATOR. 4 degree credits. \$60 plus \$12 special fee. Total \$72.

Working with the simulator program to improve, expand, and reduce the cost of conventional driver education. (Prereq 5100. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **W**—7-10:00, Rich HS 116, Lewis

secondary education (SeEd)

(See also Education)

Sander Latts, Associate Professor in General College

Betty W. Robinett, Professor of Linguistics

Ray C. Weidner, Instructor in Secondary Education

S-N registration not permitted in Secondary Education courses unless specifically indicated in course description.

SeEd 5112 FAMILY LIFE EDUCATION. 3 degree credits, \$45.

Sources and types of materials available; techniques of family life education, preparation and evaluation of instructional materials. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **M**—6:20-8:50, Bu 123, Latts

***SeEd 5171 TEACHER SELF-APPRAISAL OBSERVATION SYSTEMS.** 3 degree credits, \$45.

Analyzing videotapes in classrooms using a variety of interaction analysis coding instruments as a means of understanding, selecting, and broadening classroom behavior; dimensions and directions of coding. (No prereq. Limited to 25 students. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **T**—7-9:30, Media Center, Lindberg HS, Hopkins; Weidner

Spring Qtr Sec 2 **T**—7-9:30, Media Center, Lindberg HS, Hopkins; Weidner

SeEd 5396 METHODS OF TEACHING ENGLISH AS A SECOND LANGUAGE. 3 degree credits, \$45.

Application of linguistics to materials, methods, and practicum. Principles of selection, sequencing and presentation of instructional materials at various grade levels. (Prereq Ling 5001 or 1. Meets concurrently with Ling 5721. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **T**—6:20-8:50, Bu 123, Robinett

slavic and east european languages

Adele Donchenko, Associate Professor of Slavic Languages

Catherine Kulesov, Associate Professor of Slavic Languages

Leonard A. Polakiewicz, Instructor in Slavic Languages

See symbols, page 33.

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russian—social science

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.-8 p.m., Monday-Thursday; 8 a.m.-6 p.m., Friday; 9 a.m.-3 p.m., Saturday; closed Sunday.

russian (Russ)

The following non-language classes may be applied toward the CLA foreign language requirement, Route II (see page 61): Hist 5264, 5265, 5266; Geog 3181; Russ 3601, 3602; Pol 5443.

Russ 1101-1102 BEGINNING RUSSIAN. 5 degree credits each semester, \$70 plus \$3 course fee. Total \$73 each semester. ★

Grammar, pronunciation, reading, and practice in speaking. (No prereq for 1101; 1101 or § for 1102)

Fall Sem 1101 Sec 1 **M**—6:20-9:05, FolH 204, Polakiewicz

Spring Sem 1102 Sec 2 **M**—6:20-9:05, FolH 204, Polakiewicz

Russ 1104-1105 INTERMEDIATE RUSSIAN. 5 degree credits each semester, \$70 each semester.

Expansion of experience in speaking and understanding Russian and reading of contemporary texts. (Prereq 1102 or equivalent for 1104; 1104 or equivalent for 1105)

Fall Sem 1104 Sec 1 **T**—6:20-9:05, FolH 303, Donchenko

Spring Sem 1105 Sec 2 **T**—6:20-9:05, FolH 304, Donchenko

Russ 3601, 3602 19TH CENTURY RUSSIAN LITERATURE IN TRANSLATION. 4 degree credits each quarter, \$56 each quarter. (◆ \$28 each quarter)

3601: Pushkin, Lermontov, Gogol, Turgenev, and others. **3602:** Tolstoy, Dostoevsky, and others. No knowledge of Russian required. May be applied toward the CLA foreign language requirement, Route II (see page 61). (No prereq)

Fall Qtr 3601 Sec 1 **W**—6:20-8:50, FolH 208, Kulesov

Winter Qtr 3602 Sec 2 **W**—6:20-8:50, FolH 208, Kulesov

social science (SSci)

Jose Feola, Instructor in Therapeutic Radiology

Eleanor McGill, Instructor

Robert W. Ross, Instructor

Mulford Q. Sibley, Professor of Political Science

These courses draw on a wide variety of research findings and theories from the social sciences, arranged so as to present a coherent interpretation of several broad aspects of human behavior. Each course focuses on a significant segment of human action; the general aim is to provide the student with an understanding of how such behavior may be explained. Most of the courses are experimental, seeking to focus attention on key human and social problems areas from a variety of disciplinary approaches. These courses are now under the administrative supervision of the School of Cross-Disciplinary Studies.

See symbols, page 33.

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social science—social studies

SSci 3402-3403 ECOLOGY, TECHNOLOGY AND SOCIETY. 4 degree credits each quarter. \$56 each quarter. (♦ \$28 each quarter)

3402: The environmental crisis and its causes. Topics include: Attitudes toward nature, population, ecology and history, the energy question, conflicting values in society, the meaning of progress and growth. **3403:** An examination of public policy regarding population, physical resources and the Minnesota environment. Possible political, economic and technological solutions to the environmental crises will be explored. (No prereq)

Winter Qtr 3402 Sec 1 M—6:20-8:50, AndH 230

Spring Qtr 3403 Sec 2 M—6:20-8:50, AndH 250

SSci 3304 THE STUDENT MOVEMENT IN HISTORICAL PERSPECTIVE. 4 degree credits, \$56. (♦ \$28)

Student unrest and protest from 1961-1974 was international in scope. But was it new? This course asks the question: How have students acted in their own behalf from the founding of the medieval universities to the present? All aspects of student activism are examined in an effort to understand the role of the student in the college and university. (Prereq upper division student)

Fall Qtr Sec 1 W—6:30-9:00, ForH 175, Ross

(For further information on SSci 3304, see page 191)

***SSci 3521 INTRODUCTION TO PSYCHICAL PHENOMENA.** 4 degree credits, \$56.

A general survey of psi phenomena, including such issues as clairvoyance, telepathy, precognition, psychokinesis, alleged survival of human personality after death, out-of-the-body experiences, theories of psi, proof of psi, experimental methods, etc. Laboratory included. (Prereq sophomore. Limited to 50 students)

Fall Qtr Sec 1 M—6:30-9:30, ForH 30, Sibley, Feola, McGill

Spring Qtr Sec 2 M—6:30-9:30, ForH 30, Sibley, Feola, McGill

social studies

(General College—GC)

David Foat, Instructor

Fred Johnson, Associate Professor

Norman Moen, Professor

Frederick Neet, Instructor

The General College Social Studies courses are intended to help students become thoughtful, informed, and responsible citizens prepared to involve themselves with society's social, economic, and political problems. An effort is made in each course to acquaint students with the scope and methods of the social sciences and to apply them to the issues of the day.

***GC 1211 MAN IN SOCIETY: AN INTRODUCTION TO SOCIAL SCIENCE.** 4 degree credits, \$56.

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. Limited to 50 students)

Fall Qtr Sec 1 T—6:20-8:50, NH 209, Neet

GC 1212 MAN IN SOCIETY: URBAN PROBLEMS. 4 degree credits, \$56. (♦ \$28)

A problem-solving interdisciplinary approach to examine some major urban problems such as social class and poverty, social change, crime, education. Emphasis on field-work and/or community activities. (No prereq)

Winter Qtr Sec 1 Th—6:20-8:50, PillsH 110, Johnson

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

NEW

social studies

GC 1221 MINNESOTA HISTORY. 4 degree credits, \$56. (♦ \$28)

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)

Winter Qtr Sec 1 T—6:20-8:50, NH 207, Moen

TV

GC 1222 PRACTICAL POLITICS

A series of 10 half-hour television programs designed to acquaint the student with the opportunities and limitations for becoming involved in the political system. The course will involve the student in the political process so that he will 1) know how to use politics as "tools" to shape his future in the way he prefers; 2) test these tools; 3) make judgments about the workability of the political system as it now exists; and 4) impart knowledge that will enable him to be an effective citizen if he wishes to bring about change.

Program Titles: Individual Political Action; Group Political Action; Coalition Political Action; Citizen Lobbying; Political Caucuses; Political Parties; Campaigns; Sustained Political Activity Outside the Formal Party Organization; Alternative Actions—Protest, Alienation, Violence Explored; Panel Discussion—different viewpoints on the most effective political routes to take.

● CREDIT REGISTRATION

3 degree credits, \$42 plus \$4 special fee (study guide). Total \$46 (textbook extra). In addition to viewing the television broadcasts, registrants will be expected to complete written assignments, a take-home final examination, and participate in two political activities (such as attending a session of the state legislature or going to a political party meeting). The study guide will be mailed upon registration. (No prereq)

5 degree credits, \$70 plus \$4 special fee (study guide). Total \$74 (textbook extra). In addition to viewing the television broadcasts, registrants will be expected (in addition to above assignments) to attend ten discussion sessions (1½ hours each), one additional political activity, and either additional reading or research. (Discussion sessions will be held on Thursdays, 7:30-9:00 p.m. on the Minneapolis campus. The television program of the previous Tuesday will be repeated at 7:00 p.m. on closed circuit television for those who may want to both view the program and discuss it on the same evening. The study guide will be mailed upon registration. (No prereq)

No credit, \$24 plus \$4 special fee (study guide). Total \$28 (textbook extra). Registrants for no credit may attend the discussion sessions above. The study guide will be mailed upon registration.

● STUDY GUIDE ONLY

For home viewers who do not wish to register for credit but want to follow the television lectures, a study guide may be purchased from Extension Classes for \$4.

● MATERIALS

Textbook: Strategies for Political Participation, Burkhart, Eisenstein, Fleming and Hendrick. Revised 1974 edition, Winthrop Publishers, Cambridge, Mass.

Spring Qtr Sec 1 T—7:30-8:00, KTCA-TV, Channel 2; Oldendorf

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

human services courses

GC 3621 COUNSELING AND WORK REGARDING COMMUNITY RESOURCES. 4 degree credits, \$56.

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. (No prereq)

Fall Qtr Sec 1 **W**—6:20-8:50, NH 107, Foat

NEW

GC 3622-3623 HUMAN SERVICES SEMINAR: INDIVIDUAL GROUP SKILLS DEVELOPMENT. 2 degree credits each quarter, \$28 each quarter.

Two course sequence designed for Human Services Generalist students; emphasizes following knowledge and skills: understanding one's needs to be a helper; using effective nonverbal and verbal behavior; using self-involving behavior; understanding other's communication; establishing effective helping relationships; human relations on job. Activities include role playing, video-tape sessions, and small group discussions. (Prereq 3621 for 3622; 3622 for 3623)

Winter Qtr 3622 Sec 1 **W**—6:20-7:50, NH 207, Foat

Spring Qtr 3623 Sec 2 **W**—6:20-7:50, NH 207, Foat

NEW

social work (SW)

(See also Personal Social Service Certificate, page 81; and Foster Care Education Certificate, page 76)

The purpose of the program in Continuing Education in Social Work at the University of Minnesota is to enable social work practitioners and other helping professionals in the field of social welfare to:

- update their knowledge and skills
- acquire new knowledge and skills for new roles
- meet educational requirements for agency employment
- enable agencies to fulfill their functions in the community and to deliver better services to people

The program in Continuing Education in Social Work has several components. It includes one- and two-day institutes, conferences and workshops, seminars of varying duration, a Personal Social Service Certificate Program, quarter courses of special interest topics and organized sequential programs for administrators (9-credit Management Training Program) and direct service personnel extending over a one- and two-year period. These offerings are for persons at all levels, those who have never participated in a degree program as well as those who have; either at the BA, MA or PhD levels.

Because of program changes being planned and the possibility of offering some graduate level courses, the final Continuing Education in Social Work program was not available in time to be included in this bulletin.

Individuals interested in Social Work may obtain copies of a special brochure which will be distributed in July. Please write to or call the Department of Continuing Education in Social Work, 321 Nolte Center, University of Minnesota, Minneapolis, Minnesota 55455 (373-5831) if you are not on their mailing list.

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

sociology

sociology (Soc)

Alan V. Abramson, Instructor in Sociology
Brian C. Aldrich, Assistant Professor of Sociology
Robert Alexander, Instructor in Sociology
Al Banwart, Instructor in Sociology
Edward Brent, Instructor in Sociology
Constance C. Bulbulian, Instructor in Sociology
David Chein, Instructor in Sociology
Philip J. Cunnien, Instructor in Sociology
Wm. Ross Greenleaf, Instructor in Sociology
Brent Miller, Instructor in Sociology
Ed Suntrup, Instructor in Sociology

Soc 1001 INTRODUCTION TO SOCIOLOGY. 4 degree credits, \$56. (♦ \$28) ★

A survey of the main substantive fields of sociology for non-prospective sociology majors, illustrative material drawn from 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, BlegH 335, Suntrup
Sec 2 **M**—7-9:30, Sand JHS 205, Aldrich (Limit 35 students*)
Sec 3 **S**—9-11:30 a.m., BlegH 230, Greenleaf
Fall Sem Sec 4 **Th**—6:20-8:00, BlegH 155, Abramson
Winter Qtr Sec 5 **T**—6-8:30, Rich HS 341, Miller
Sec 6 **W**—5:30-8:00, BlegH 155, Suntrup
Sec 7 **Th**—5:30-8:00, BlegH 235, Aldrich
Sec 8 **S**—9-11:30 a.m., BlegH 235, Bulbulian
Spring Sem Sec 9 **W**—6:20-8:00, BlegH 130, Abramson
Spring Qtr Sec 10 **M**—6:20-8:50, BlegH 110, Aldrich
Sec 11 **S**—9-11:30 a.m., BlegH 10, Suntrup

Soc 1002 AMERICAN COMMUNITY. 4 degree credits, \$56. (♦ \$28)

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 **M**—6:20-8:50, Cunnien
Spring Qtr Sec 2 **T**—6:20-8:50, Cunnien

***Soc 1002 AMERICAN COMMUNITY.** 4 degree credits, \$56.

Part of an integrated series "Values in Transition: an Examination of Forces Acting on the Individual in Modern America." (See page 192). See description above. (Prereq concurrent registration in *AmSt 1102 or 3112. Students registered in Fall Sem part of series will be given registration priority. Limited to 50 students.)

Spring Sem Sec 3 **T**—8:15-9:55, BlegH 10, Sykes

Soc 3101 ELEMENTS OF CRIMINOLOGY. 4 degree credits, \$56. (♦ \$28) ★

General survey of field of criminology. (Prereq 1001 or 3505, 3506 or old 1505-1506 or ‡)

Fall Sem Sec 1 **T**—8:15-9:55, AndH 350, Chein
Spring Sem Sec 2 **T**—8:15-9:55, AndH 350, Chein

Soc 3505 PRINCIPLES OF SOCIAL ORGANIZATION. (replaces 1505) 5 degree credits, \$70.

See symbols, page 33.

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sociology

Develop understanding of basic concepts, substantive materials, and general issues in the area of social organization. (Prereq 1001 and 3801 or equivalent)

Fall Sem Sec 1 T—6:20-8:00, BlegH 10, Brent

Soc 3506 PRINCIPLES OF SOCIAL PSYCHOLOGY. (replaces 1506) 5 degree credits, \$70.

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)

Spring Sem Sec 1 T—6:20-8:00, BlegH 10, Brent

Soc 3801 SOCIOLOGICAL METHODS I: DESCRIPTIVE STATISTICS. 4 degree credits, \$56 plus \$4 course fee. **Total \$60.**

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. (No prereq. Some beginning algebra recommended)

Fall Qtr Sec 1 TTh—6-8:00, AndH 210

Soc 3802 SOCIOLOGICAL METHODS II: STATISTICAL INFERENCE. 4 degree credits, \$56 plus \$4 course fee. **Total \$60.**

Statistical inferences, probability, hypothesis tests, use of statistical reasoning in analysis of sociological data. (Prereq 3801 or §)

Winter Qtr Sec 1 TTh—6-8:00, BlegH 130

Soc 3803 SOCIOLOGICAL METHODS III: RESEARCH METHODS. 4 degree credits, \$56 plus \$4 course fee. **Total \$60.**

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 T—6-8:00, BlegH 150
Th—6-8:00, BlegH 215

Soc 5111 SOCIOLOGY OF DEVIANT BEHAVIOR. 4 degree credits, \$60. (◆\$30)

Sociological conceptions of the nature of deviant behavior, the social processes associated with the careers of deviants, and the relations of deviancy to the problems of social control. (Prereq 3101 or §. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 Th—6-8:30, BlegH 230, Chain

Soc 5141 DELINQUENT BEHAVIOR. 4 degree credits, \$60. (◆\$30)

Critical analysis of nature of delinquent behavior and its "causes;" consideration of help that understanding of causes can give to its modification and its prevention. (Prereq 3101 or §. Qualified students may register for graduate credit at the University of Minnesota)

Fall Sem Sec 1 W—8:15-9:55, BlegH 10, Chain

Soc 5151 RELIGION AS A SOCIAL INSTITUTION. 4 degree credits, \$60. (◆\$30)

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 1001 or 3505, 3506 or old 1505-1506 or §. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 W—5:30-8:00, BlegH 420, Bulbulian

Soc 5201 INTRODUCTION TO SOCIAL PSYCHOLOGY. 4 degree credits, \$60. (◆\$30)★

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. (Prereq 1001 or 3505, 3506 or old 1505-1506 or §. Qualified students may register for graduate credit at the University of Minnesota)

See symbols, page 33.

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sociology

Fall Qtr Sec 1 **M**—5:30-8:00, AndH 330, Bulbulian

Spring Qtr Sec 2 **M**—5:30-8:00, AndH 350, Bulbulian

Soc 5401 SOCIAL ORGANIZATION. 4 degree credits, \$60. (◆\$30)

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. (Prereq 1001 or 3505, 3506 or old 1505-1506 or §. Qualified students may register for graduate credit at the University of Minnesota)

Fall Sem Sec 1 **W**—6:20-8:00, BlegH 230, Abramson

Soc 5501 THE FAMILY. 4 degree credits, \$60. (◆\$30)★

Evolution of family, development of unity or disunity, roles of the several members of family, methods of investigation of family. (Prereq 1001 or 3505, 3506 or old 1505-1506 or §. Qualified students may register for graduate credit at the University of Minnesota)

Spring Sem Sec 1 **W**—6:20-8:00, BlegH 245, Banwart

Soc 5705 BACKGROUNDS OF MODERN SOCIAL THOUGHT. 4 degree credits, \$60. (◆\$30)

Major trends of social thought from Renaissance to 19th century; factors contributing to origin of sociology. (Prereq 1001 or 3505, 3506 or old 1505-1506. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **Th**—5:30-8:00, BlegH 330, Suntrup

Soc 5711 ELEMENTS OF SOCIOLOGICAL ANALYSIS. 4 degree credits, \$60. (◆\$30)

Examination and analysis of premises upon which social theories are developed. Examination and analysis of construction of social theories. (Prereq 9 or in sociology. Qualified students may register for graduate credit at the University of Minnesota)

Spring Sem Sec 1 **M**—6:20-8:00, BlegH 245, Abramson

Soc 5951 MINORITY GROUP RELATIONS. 4 degree credits, \$60. (◆\$30)★

Interaction of social and cultural groups in America; particular reference to the Negro. Processes leading to group contact; characteristics and contribution of ethnic groups in United States; mechanisms and problems of group adjustment. Democratic theory and practice; sources of prejudice; contemporary status of principal minority groups; international implications; trends and proposed solutions. (Prereq 1001 or 3505, 3506 or old 1505-1506 or §. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **T**—5:30-8:00, AndH 270, Alexander

Soc 5956 SOCIOLOGY OF DEATH

A series of 10 one-hour television programs which will examine the issues and problems that mortality presents in contemporary society. For health care and other professionals, teachers, general public.

Program Titles: Death in American Society—an Overview; 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 in the Problems Surrounding Death; Ethical Issues.

● **CREDIT REGISTRATION**

4 degree credits, \$56 plus \$4 special fee (study guide). **Total \$60** (texts extra). In addition to viewing the television broadcasts, registrants will be expected to complete assigned readings in the texts listed below, write a comprehensive term paper, and complete the take-home final examination (essay). The study guide will be mailed upon registration. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

soil science—south asian studies

● STUDY GUIDE ONLY

For home viewers who do not wish to register for credit but want to follow the television lectures, a study guide may be purchased from Extension Classes for \$4.

● MATERIALS

Textbooks: *A Death in the Family*, James Agee; *The Meaning of Death*, H. Feifel; *Explaining Death to Children*, E. Grollman et. al.; *On Death and Dying*, E. Kubler-Ross; *Death and the College Students*, E. Shneidman; *Passing On*, D. Sudnow. Books may be purchased in person or by mail from the Harold Smith west bank bookstore. See **bookstores**, page 23 and maps, page 325.

Fall Qtr Sec 1 M—9-10:00, KTCA-TV, Channel 2, St. Paul-Minneapolis
WDSE-TV, Channel 8, Duluth
KWCM-TV, Channel 10, Appleton
KFME-TV, Channel 13, Fargo-Moorhead
Fulton

soil science (Soils)

(See also Architecture, Landscape Architecture, Horticulture)

Russell S. Adams Jr., Professor of Soil Science

Harold F. Arneman, Professor of Soil Science

Lowell Hanson, Professor of Soil Science and Extension Specialist

Richard H. Rust, Professor of Soil Science

Soils 0100C GARDEN SOIL MANAGEMENT. 3 certificate credits, \$42. (◆\$21)

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, Arneman, Hanson

Soils 5520 SOIL DEVELOPMENT AND CLASSIFICATION. 3 degree credits, \$45 plus \$5 course fee. **Total \$50** (◆\$22.50 plus \$5 course fee. Total \$27.50)

Soil profile characteristics; influence of parent material, climate, topography, vegetation, and time on soil development; system of soil classification; and world distribution of major soil groups. (Note: This is being offered to permit field soil scientists and geologists to update their knowledge of soil taxonomy). (Prereq 5512 or §. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 Time arr. Rust

south asian studies

indic (Indc)

The following non-language classes may be applied toward the CLA foreign language requirement, Route II (See page 61):

Indc 1201 ANCIENT INDIAN LITERATURE IN TRANSLATION. 4 degree credits, \$5201. \$56. (◆\$28)

Erotic and Mystic Love Poetry: Introduction to the nature of love poetry in Sanskrit, Prakrit, and Tamil, the three classical languages which are the bases

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

south asian studies—spanish

NEW

for the literatures of the modern languages of India. The course will deal with literary material which blends eroticism with mysticism and poetry with philosophy. May be applied toward the CLA foreign language requirement, Route II (see page 61). (No prereq. Meets concurrently with 5201)

Fall Qtr Sec 1 T—6-8:30, FoH 302

Indc 5201 ANCIENT INDIAN LITERATURE IN TRANSLATION. 4 degree credits, \$1201. \$60.

NEW

See course description for 1201. May be applied toward the CLA foreign language requirement, Route II (see page 61). (No prereq. Meets concurrently with 1201. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 T—6-8:30, FoH 302

spanish (Span)

Robert Estelle, Assistant Professor of Spanish
Rodolfo O. Floripe, Professor of Spanish
Larry M. Grimes, Assistant 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, Assistant Professor of Spanish
Ronald Sousa, Assistant Professor of Spanish and Portuguese
Nicholas Spadaccini, Assistant Professor of Spanish
Constance Sullivan, Assistant Professor of Spanish
Hernán Vidal, Associate Professor of Spanish
William Woodhouse, Instructor in Spanish

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.

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

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

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.-8 p.m., Monday-Thursday; 8 a.m.-6 p.m., Friday, 9 a.m.-3 p.m., Saturday, closed Sunday.

The following courses in English translation offered by the Spanish Department may be applied toward the CLA foreign language requirement, Route II, (see page 61); Span 1501, 3601, 3602. The following non-language classes may also be applied toward the CLA foreign language requirement, Route II, (see page 61); Mus 5704, 5707.

Span 1101-1102-1103 BEGINNING SPOKEN SPANISH: ORAL APPROACH. 5 degree credits each quarter. \$70 plus \$3 course fee each quarter. **Total \$73.★**

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

Sec 2 **Th**—6-10:05, FolH 205

Winter Qtr 1102 Sec 3 **TTh**—6-8:05, FolH 207

Sec 4 **Th**—6-10:05, FolH 208

Spring Qtr 1103 Sec 5 **TTh**—6-8:05, FolH 204

Sec 6 **Th**—6-10:05, FolH 208

Span 1104 INTERMEDIATE SPANISH, ORAL APPROACH: INTERPRETATION OF MODERN PROBLEMS. 4 degree credits, \$56.★

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 **TTh**—6-7:40, FolH 208

Span 1105 INTERMEDIATE SPANISH, ORAL APPROACH: DISCUSSIONS OF MODERN LITERATURE AND THE PRESS. 4 degree credits, \$56.★

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 **TTh**—6-7:40, FolH 204

Span 1201-1202-1203-1204-1205 BEGINNING SPANISH: MODIFIED ORAL APPROACH. 3 degree credits each quarter, \$42 plus \$3 course fee. **Total \$45** 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 104

1204 Sec 2 **T**—6-8:30, FolH 105

Winter Qtr 1202 Sec 3 **T**—6-8:30, FolH 104

1205 Sec 4 **T**—6-8:30, FolH 104

Spring Qtr 1203 Sec 5 **T**—6-8:30, FolH 104

Span 1501 CULTURE, CIVILIZATION OF SPAIN, PORTUGAL: THE ROOTS OF MODERN SPAIN, PORTUGAL. 4 degree credits, \$56. (◆\$28)

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. May be applied toward the CLA foreign language requirement, Route II (see page 61). (No prereq)

Fall Qtr Sec 1 **W**—6-8:30, FolH 306

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

spanish—special education

Span 3014 SPANISH COMPOSITION AND COMMUNICATION SKILLS: EVERYDAY SPEECH, ARGOT AND DIALOGUE. 5 degree credits, To be offered 1975-76.

Span 3601 SPANISH AMERICA: REVOLUTION AND THE NEW LITERARY CONSCIOUSNESS. 4 degree credits, \$56. (♦\$28)

A course in English designed to explore the contemporary novels that best capture the relationship between political consciousness and literary expression. The culture and political situation of Spanish America has given birth to some of the most exciting, controversial and talked about novels in the world. This course will introduce the avant-garde movements in the fiction of the Latin American continent and show how they correspond to the revolutionary trends prevailing in the different Spanish speaking countries. The course will concentrate on famous novels translated into English. (No prereq. May be applied toward the CLA foreign language requirement, Route II, [see page 61])

Winter Qtr Sec 1 **M**—6-8:30, FoH 306

Span 3602 THE PICARESQUE WAY OF LIFE IN SPAIN AND EUROPE: LITERATURE AND THE DELINQUENT. 4 degree credits, \$56. (♦\$28)

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 [see page 61]. (No prereq)

Spring Qtr Sec 1 **W**—6-8:30, FoH 306

Span 3614 DON QUIJOTE: STUDY OF LOST ILLUSIONS. 4 degree credits. To be offered 1975-76.

spanish for graduate students

The Spanish language requirement for a graduate degree can be satisfied by successfully passing an examination given at the end of a one-quarter course, 0221, specifically designed for students who desire only a reading knowledge of the language.

Span 0221 SPANISH FOR GRADUATE STUDENTS. No credit, \$42.★

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 is given 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. (No prereq)

Winter Qtr Sec 1 **W**—6:20-8:50, FoH 105

Spanish 0221 is offered as a Summer Extension Class.

special education (SpEd)

(See also Education)

S-N registration not permitted in Special Education unless specifically indicated in course description.

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

special education—speech-communication

Bruce Balow, Professor of Special Education
Stanley Deno, Associate Professor of Special Education
Glenda Martin, Instructor in Special Education
Robert W. McCauley, Assistant Professor of Special Education

***SpEd 5100 CHILDHOOD LANGUAGE DEVELOPMENT: CLASSROOM IMPLICATIONS.**
3 degree credits, \$45.

Recent trends and findings in language acquisition; classroom implications for the education of exceptional children. (No prereq. Limited to 40 students. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **M**—7-9:00, Pt 214

***SpEd 5112 EDUCATION OF LEARNING-DISABLED CHILDREN.** 3 degree credits, \$45.

Analysis of considerations in design and conduct of services for learning-disabled children; approaches to education of such children. (No prereq. Limited to 35 students. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **M**—6-8:30, Kel HS 168-170, Balow

***SpEd 5150 EDUCATION OF EMOTIONALLY DISTURBED AND SOCIALLY MALADJUSTED CHILDREN.** 3 degree credits, \$45.

Discussion and evaluation of curricula, materials, and methods for instruction of disturbed and delinquent children in hospital, training school, and public school settings. (Prereq \dagger . Limited to 35 students. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **W**—7-9:30, Kel HS 168-170, McCauley

Spring Qtr Sec 2 **W**—7-9:30, Sand JHS 209

SpEd 5170 INTRODUCTION TO EDUCATION OF VISUALLY HANDICAPPED CHILDREN.
3 degree credits, \$45.

Educational programs, services, and resources for blind and partially seeing children; historical background; philosophy; sociological and psychological problems. (Prereq \dagger . Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **W**—7-9:30, CD 105, Martin

***SpEd 5301 CONTINGENCY MANAGEMENT IN SPECIAL EDUCATION SYSTEMS.** 3 degree credits, \$45.

Designing special instructional systems based on an experimental analysis of academic and social behavior. (No prereq. Limited to 25 students. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **W**—7-9:30, Kel HS 233, Deno

speech-communication (Spch)

(See also Communications [General College])

Leonard D. Bart, Associate Professor of Speech-Communication
Ernest G. Bormann, Professor of Speech-Communication
Karen J. Garvin, Assistant Professor of Speech-Communication
Ronald S. Geizer, Assistant Professor of Speech-Communication
William S. Howell, Professor of Speech-Communication
Harold A. Miller, Associate Professor of Speech-Communication
David Rarick, Assistant Professor of Speech-Communication
George L. Shapiro, Professor of Speech-Communication
Donald Z. Woods, Professor of Speech-Communication

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

speech-communication

- *Spch 0001C BEGINNING SPEECH-COMMUNICATION.** 3 certificate credits, \$42 (plus \$5.50 special fee for Minneapolis Campus only. Total \$47.50)

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

Sec 2 **Th**—7-9:30, Rich HS 209

Winter Qtr Sec 3 **M**—6:20-8:50, NH 216, Woods

Spring Qtr Sec 4 **M**—6:20-8:50, NH 216, Woods

Sec 5 **Th**—7-9:30, KelHS 235

- *Spch 1101 FUNDAMENTALS OF SPEECH COMMUNICATION: ORAL COMMUNICATION.** 4 degree credits, \$56.

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 **T**—6:20-8:50, FolH 307, Bart

Spring Qtr Sec 2 **M**—6:20-8:50, FolH 306, Garvin

- *Spch 3201 INTRODUCTION TO BROADCASTING PRODUCTION.** 4 degree credits, \$56.

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. (Prereq 1104. Limited to 25 students)

Winter Qtr Sec 1 **W**—6:20-8:50, RarigC 616, Bart

- *Spch 3641 DISCUSSION AND CONFERENCE METHODS.** 4 degree credits, \$56.

Cooperative thinking in task-oriented groups. Planning, preparing for, participating in, and leading private and public meetings. (Prereq 1101 or 1101H or §. Limited to 25 students)

Winter Qtr Sec 1 **T**—6:20-8:50, FolH 307, Garvin

- *Spch 5402 PROBLEMS IN INTERPERSONAL COMMUNICATION.** 4 degree credits, \$60.

A study of factors contributing to misunderstanding, not understanding, disagreement and cessation of contact in dyads. (Prereq 3401 or §. Limited to 25 students. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **M**—6:20-8:50, FolH 306, Rarick

- *Spch 5405 NONVERBAL COMMUNICATION.** 4 degree credits, \$60.

Nonverbal (extra-linguistic) elements and dimensions of interpersonal communication. Nonverbal categories examined include gesture, facial expression, posture, clothing and environment. (No prereq. A joint Day/Extension course limited to 10 Extension students. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **TTh**—4:15-6:00, FolH 307, Geizer

- *Spch 5411 SMALL GROUP COMMUNICATION.** 5 degree credits, \$75.

Study of communication and dynamics within the small, task-oriented group. Cohesiveness, leadership, role structure, information processing and decision making. **S-N registration only.** (Prereq 3641 or §. Limited to 25 students. Qualified students may register for graduate credit at the University of Minnesota)

Fall Sem Sec 1 **T**—6:20-9:05, FolH 305, Bormann

- *Spch 5421 QUANTITATIVE RESEARCH IN COMMUNICATION.** 4 degree credits, \$60.

Review and discussion of experimental and descriptive research; analysis of research and design and procedures; individual research projects. (Prereq 3401

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

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speech-communication—personal orientation

or 5403, or §. (A joint Day /Extension course limited to 10 Extension students) Qualified students may register for graduate credit at the University of Minnesota.

Spring Qtr Sec 1 **MW**—4:15-6:00, FolH 306, Geizer

*Spch 5422 INTERVIEWING AND COMMUNICATION. 4 degree credits, \$60.

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 5 Extension students) Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **MW**—4:15-6:00, FolH 306, Rarick

Spch 5431 THE PROCESS OF PERSUASION. 4 degree credits, \$60.

Theories of modern motivational communication. Analysis of the process of social control through persuasive speech. (Prereq 1102 or Psy 1001. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **TTh**—4:15-6:00, FolH 306, Howell (A joint Day/Extension course limited to 10 Extension students*)

Spring Qtr Sec 2 **T**—6:20-8:50, FolH 306, Miller

*Spch 5441 COMMUNICATION IN HUMAN ORGANIZATIONS. 4 degree credits, \$60.

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. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **MW**—4:15-6:00, FolH 308, Shapiro

*Spch 8431 SEMINAR IN PERSUASION. 3 degree credits, \$48.

Literature of persuasion, methods in study of persuasion. (Prereq 5431. A joint Day/Extension course limited to 5 Extension students. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **T**—4:15-6:00, FolH 306, Howell

study skills

(See also Rhetoric; Communication Skills [General College])

Susan Johnson, Instructor, Student Counseling Bureau

David M. Wark, Associate Professor, Student Counseling Bureau

personal orientation (PO)

PO 1001 HOW TO STUDY. 2 degree credits. (Credits do not count toward a B.A. degree; however, grades are included in the over-all grade point average.) \$42 plus \$2 course fee. Total \$44.

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 35 students)

Fall Qtr Sec 1 **T**—6:20-8:50, EdH 102

Fall Sem Sec 2 **M**—6:20-8:00, EdH 102, Wark

Spring Qtr Sec 3 **M**—6:20-8:50, EdH 102

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

swedish—theatre arts

swedish

(See Scandinavian Languages)

theatre arts (Th)

Arthur H. Ballet, Professor of Theatre Arts

Horace Bond, Instructor in Theatre Arts

C. Lance Brockman, Assistant Professor of Theatre Arts

Louis Dezseran, Assistant Professor of Theatre Arts

Thomas Hegg, Teaching Assistant in Theatre Arts

Dennis Maganza, Teaching Associate in Theatre Arts

Sister Peggy O'Connel, Visiting Instructor in Theatre Arts

Carol Simpson, Teaching Associate in Theatre Arts

Peter Thoemke, Teaching Associate in Theatre Arts

Th 1101 INTRODUCTION TO THE THEATRE. 4 degree credits, \$56. (◆\$28)

An orientation in the great dramatic tradition through a consideration of plays and playwrights from Sophocles to Tennessee Williams. It covers the history of theatrical customs, conventions, and traditions as they affect modern stage production and includes a view of the highlights of theatre, architecture, scenic design, stagecraft, lighting, costumes, make-up and special effects. Lectures will be presented on video tape. (No prereq)

Fall Qtr Sec 1 T—6:20-8:50, SciCB 125, Ballet

Spring Qtr Sec 2 T—6:20-8:50, SciCB 125, Ballet

***Th 1321 BEGINNING ACTING: CREATIVE APPROACH.** 4 degree credits, \$56.

Creation and presentation of original scenes and exercises. Ability to respond to the imaginative situation with individuality and effectiveness stressed. (Prereq 1504 or 11504. Limited to 24 students)

Fall Qtr Sec 1 S—9:15 a.m.-12:00, WeH 302, Dezseran

Winter Qtr Sec 2 W—6:20-8:50, WeH 302, Bond

Th 1326 BEGINNING ACTING: TECHNIQUE. 4 degree credits, \$56.

Fundamentals of body movement, rhythms, and acting technique. Individual and group performances. (Prereq 1321)

Fall Qtr Sec 1 S—9:15a.m.-12:00, RarigC 610, Maganza

Th 1328 MIME AND THE ACTOR. 2 degree credits, \$28.

Basic techniques and the domain of mime explored through class participation. (Prereq 1321)

Fall Qtr Sec 1 S—12:30-2:30, RarigC 616, Dezseran

Th 1504 ELEMENTS OF TECHNICAL THEATRE. 4 degree credits, \$56.

The practice of the arts and crafts of the theatre; scenery and particularly construction and painting, stage operation, theatre lighting, costumes, or make-up. (Prereq 1101 or 11101. Further sessions will be scheduled at first class meeting)

Fall Qtr Sec 1 Th—6:20-10:30, RarigC 616, Brockman

Winter Qtr Sec 2 Th—6:20-10:30, RarigC 616, Brockman

Th 3314 STAGE FENCING AND COMBAT: HISTORY AND EXECUTION. 2 degree credits, \$28.

History of weapons through the ages; fighting and fencing; use of weapons in stage combat. (Prereq 1504 or 11504)

Fall Qtr Sec 1 S—9:15 a.m.-12:00, NH 207, Thoemke

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See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

theatre arts—transportation

Th 3321 **ADVANCED ACTING.** 4 degree credits, \$56.

Presentation of scenes from great plays. (Prereq 1321 or 1326)

Spring Qtr Sec 1 **S**—9:15-12:00, RarigC 616, Dezseran

Th 3322 **ADVANCED ACTING: DIALECTS.** 4 degree credits, \$56.

(Prereq 1321 or 1326)

Spring Qtr Sec 1 **S**—12:30-2:30, RarigC 610, Dezseran

Th 3801 **ORAL INTERPRETATION OF FICTION.** 4 degree credits, \$56.

Study of selected short stories. Solo and group readings. (Prereq 1101 or Spch 1101, junior)

Fall Qtr Sec 1 **T**—6:20-8:50, RarigC 616, Simpson

*Th 5131 **CREATIVE DRAMATICS.** 4 degree credits, \$60 plus \$2 special fee. **Total \$62.**

This course will introduce elementary school classroom teachers to the principles and methods of developing original dramatization with children and how these activities may be integrated as an essential part of the language arts and/or social studies curriculum. Class work will involve observations of children's classes in creative dramatics, readings, projects, term papers. (Prereq elem school teacher, 1101 or $\frac{1}{2}$. Limited to 25 students. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **Th**—4-7:30, Plymouth Junior High School, Robbinsdale; O'Connel

Spring Qtr Sec 2 **Th**—4-7:30, Marshall University High School, O'Connel

transportation (Tran)

(See also IT 3401, Transportation, page 242)

Frederick J. Beier, Associate Professor of Transportation and Logistics

Donald V. Harper, Professor of Transportation and Logistics

James P. Rakowski, Assistant Professor of Transportation and Logistics

*Tran 3054 **FUNDAMENTALS OF TRANSPORTATION.** 4 degree credits, \$6154, \$56.

Organization and economic aspects of the transportation system of the United States including rail, highway, air, pipeline, and water transportation. Administration of transportation by users of transportation, providers of transportation (carriers), and government. (Prereq Econ 1002 or equiv. Limited to 40 students)

Fall Qtr Sec 1 **M**—5:30-8:00, AndH 210, Harper

Sec 2 **W**—5:30-8:00, AndH 350, Rakowski

Winter Qtr Sec 3 **M**—5:30-8:00, AndH 310, Harper

Spring Qtr Sec 4 **M**—5:30-8:00, AndH 230, Harper

Sec 5 **W**—6:30-9:00, Sand JHS 205, Rakowski (Limit 35 students*)

Tran 3064 **BUSINESS LOGISTICS.** 5 degree credits, \$6264, \$70.

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. (Prereq 3054. For graduate credit register in 8264)

Winter Qtr Sec 1 **W**—5:30-8:00, AndH 350, Rakowski

Tran 8264 **BUSINESS LOGISTICS.** 5 degree credits, \$3064, \$80.

See course description for 3064. Meets concurrently with 3064. (Prereq 3054 or 8154. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **W**—5:30-8:00, AndH 350, Rakowski

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

N
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N
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W

urban affairs—women's studies

urban affairs

(See Public Policy)

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, \$42.

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)

Sp Term Sec 1 Th—Jan. 9-May 1, VetC C235, Hanson, Mather (coordinators)

vocabulary building

(See Communication Skills [General College])

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 Stephen Miletich, 125 Peik Hall, University of Minnesota, Minneapolis, Minnesota 55455 (373-7791). Requests for other instructional services should also be directed to Mr. Miletich.

women's studies (WoSt)

(See other courses related to Women's Studies, page 174)

Pat Faunce, Assistant Professor in Women's Studies
Toni McNaron, Coordinator of Women's Studies
Miriam Roshwald, Assistant Professor in Women's Studies

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

women's studies—world affairs

WoSt 1001 INTRODUCTION TO WOMEN'S STUDIES. 4 degree credits, \$56 plus \$3 course fee. **Total \$59.** (♦\$28 plus \$3 course fee. Total \$31)

Introduction to women's studies including brief history of feminism, nationally and locally; survey of women's issues; survey of biological and/or learned behaviors. (No prereq)

Winter Qtr Sec 1 **Th**—6:20-9:40, SmithH 315

WoSt 1977 THE PSYCHOLOGICAL ENVIRONMENT OF WOMEN. 4 degree credits, \$56. (♦\$28)★

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 **T**—6:20-8:50, SmithH 315, Faunce

***WoSt 3631 WOMEN IN THE OLD TESTAMENT.** 4 degree credits, \$56.

The Hebraic concept of womanhood is illustrated in the rich gallery of Biblical prototypes. Feminine virtue and vice, woman's various roles and functions, her status, the ideals and symbols which she represents are the topics discussed in this course. (No prereq. Limited to 30 students)

Fall Qtr Sec 1 **Th**—6:20-8:00, BlegH 260, Roshwald

***WoSt 3701 WOMAN'S QUEST FOR SELF-REALIZATION.** 4 degree credits, \$56.

Woman's quest for self-fulfillment is explored through the study of classics in modern fiction. The texts examined will include works of English, French, Russian and Hebrew writers, which will set the problem in a wide comparative perspective. (No prereq. Limited to 30 students)

Spring Qtr Sec 1 **Th**—6:20-9:30, SmithH 315, Roshwald

WoSt 5311 WOMEN AND THE LAW. 4 degree credits, \$60 plus \$5 course fee. **Total \$65.** (♦\$30 plus \$5 course fee. Total \$35)

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 **W**—6:20-8:50, SmithH 315

world affairs

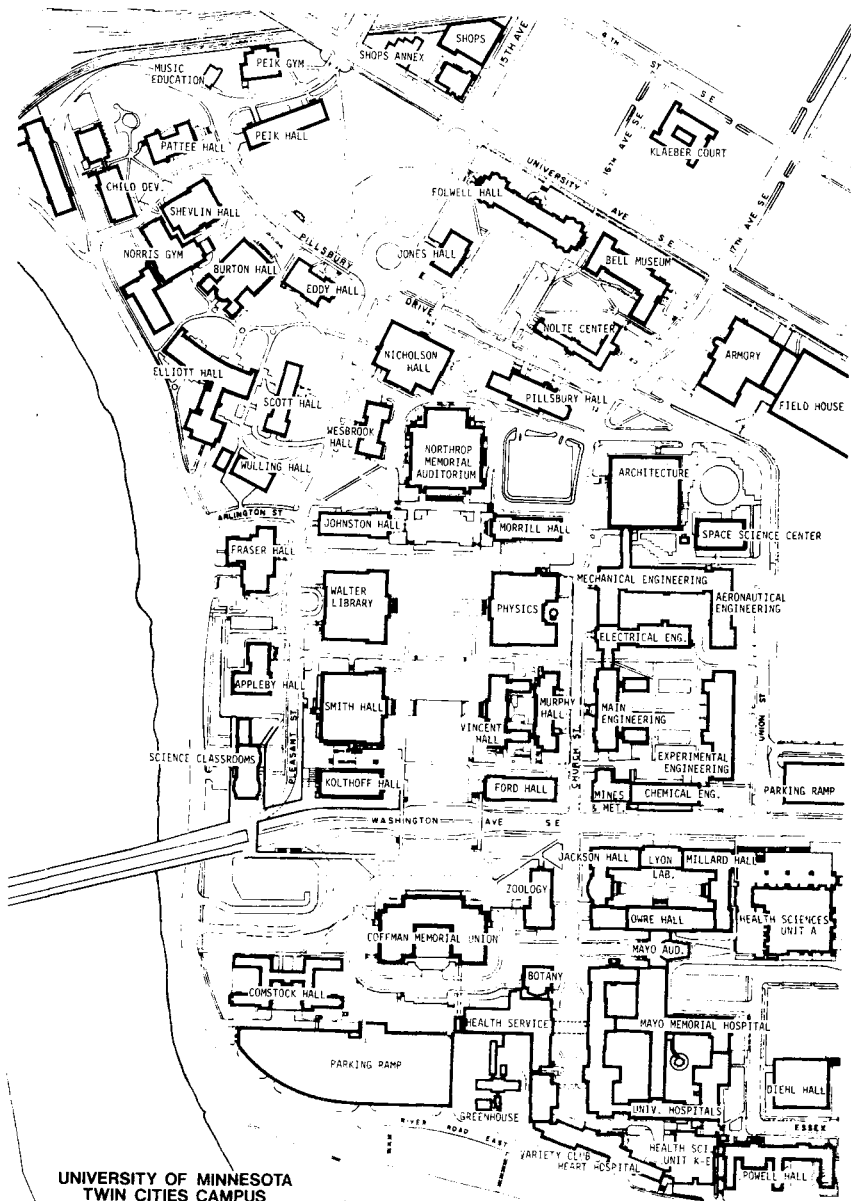
For information on non-credit conferences or workshops in world affairs, please contact William C. Rogers, 306 Westbrook Hall; telephone 373-3709.

See symbols, page 33.

See building abbreviations, page 324; see department abbreviations, page 331.

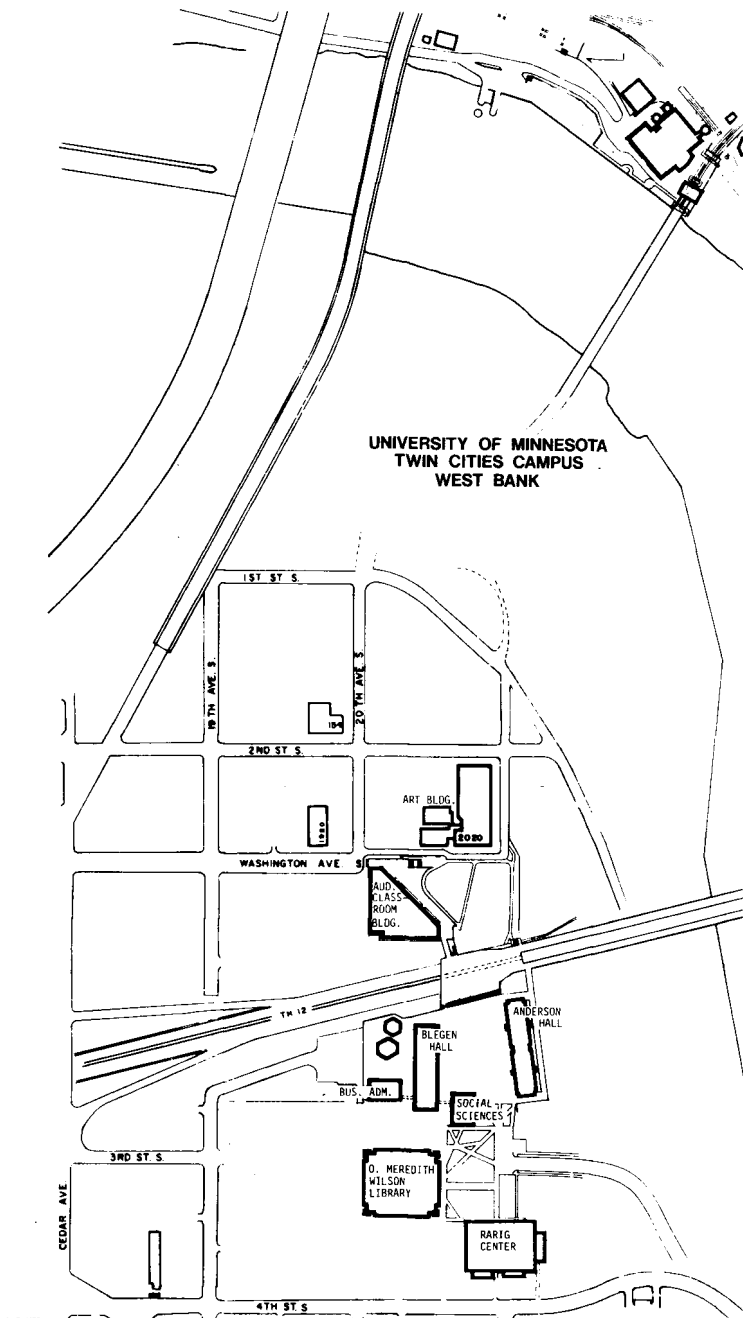
building abbreviations

- Aero, Aeronautical Engineering
AgEng(StP), Agricultural Engineering
AH, Appleby Hall
AndH, Anderson Hall
Arch, Architecture
Armory, Armory Bldg.
ArtB, Art Building (2020 Washington Ave. So., Minneapolis)
AudCB, Auditorium Classroom Bldg
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
CofH(StP), Coffey Hall
DiehH, Diehl Hall
DinC(StP), Dining Center
EdH, Eddy Hall
Elth, Elliott Hall
EntFW(StP), Entomology, Fisheries, and Wildlife Bldg.
Ex, Experimental Engineering
FolH, Folwell Hall
ForH, Ford Hall
FP(StP), Forest Products
FraH, Fraser Hall
FScN(StP), Food Science & Nutrition
HckrH(StP), Haecker Hall
HolB, Holman Building (2035 University Ave.)
HortS(StP), Horticultural Sciences (new building)
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
Kel HS, Kellogg High School (15 E. County Road B2, Roseville)
KlaCt, Klaeber Court
KoltH, Kolthoff Hall
MacP, MacPhail Center (1128 LaSalle Ave., Minneapolis)
MainE, Main Engineering
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
MSciL(StP), Meat Science Laboratory
Mtk HS, Minnetonka Senior High School (Highway 7, Excelsior)
MurH, Murphy Hall
MusEd, Music Education
NCCE, Nolte Center for Continuing Education
NGW, Norris Gymnasium for Women
NH, Nicholson Hall
NMA, Northrop Memorial Auditorium
NorH(StP), North Hall
OMWL, O Meredith Wilson Library
Owre, Owre Hall
PeikH, Peik Hall
Ph, Tate Laboratory of Physics
PillsH, Pillsbury Hall
PoH, Powell Hall
PolDB, Police Department Bldg.
Pt, Pattee Hall
RarigC, Rarig Center
Rich HS, Richfield High School (7001 Harriet Ave., Richfield)
Sand JHS, Sandburg Junior High School (2400 Sandburg Lane, Golden Valley)
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
WuH, Wulling Hall
Z, Zoology






UNIVERSITY OF MINNESOTA
TWIN CITIES CAMPUS
EAST BANK

UNIVERSITY OF MINNESOTA
TWIN CITIES CAMPUS
WEST BANK



PARKING FACILITIES (East and West Bank)

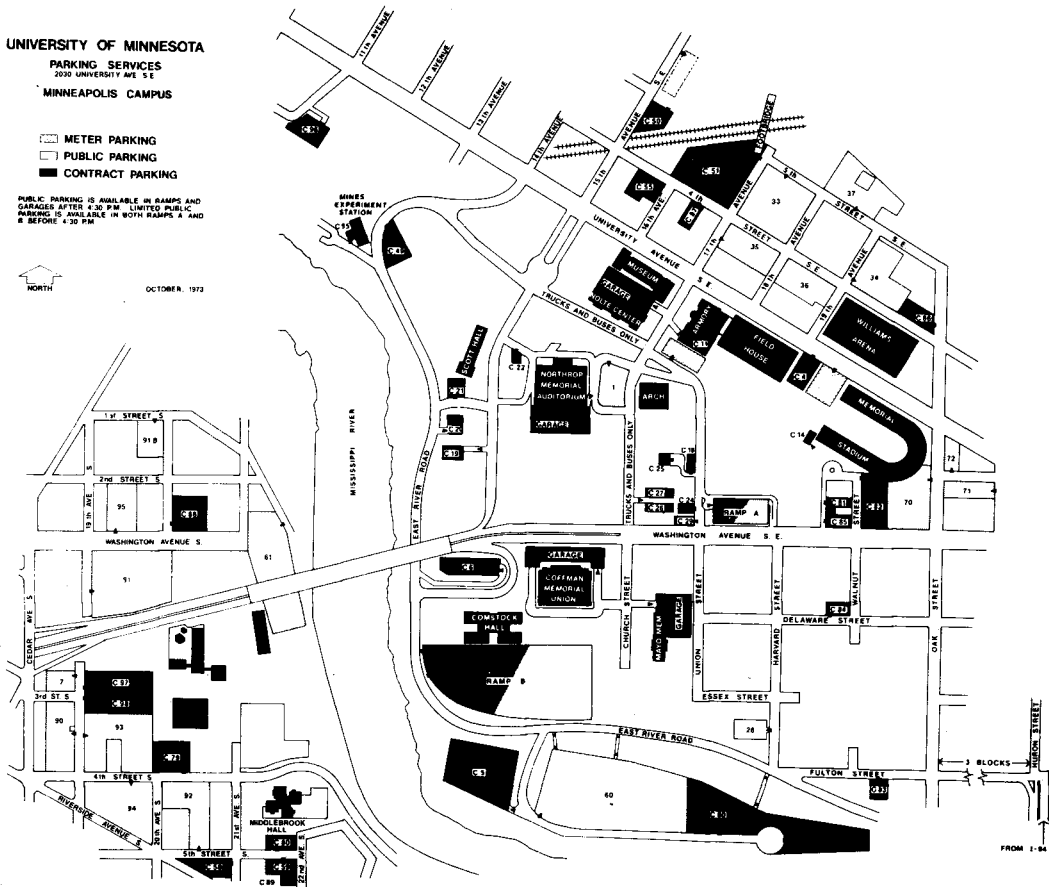
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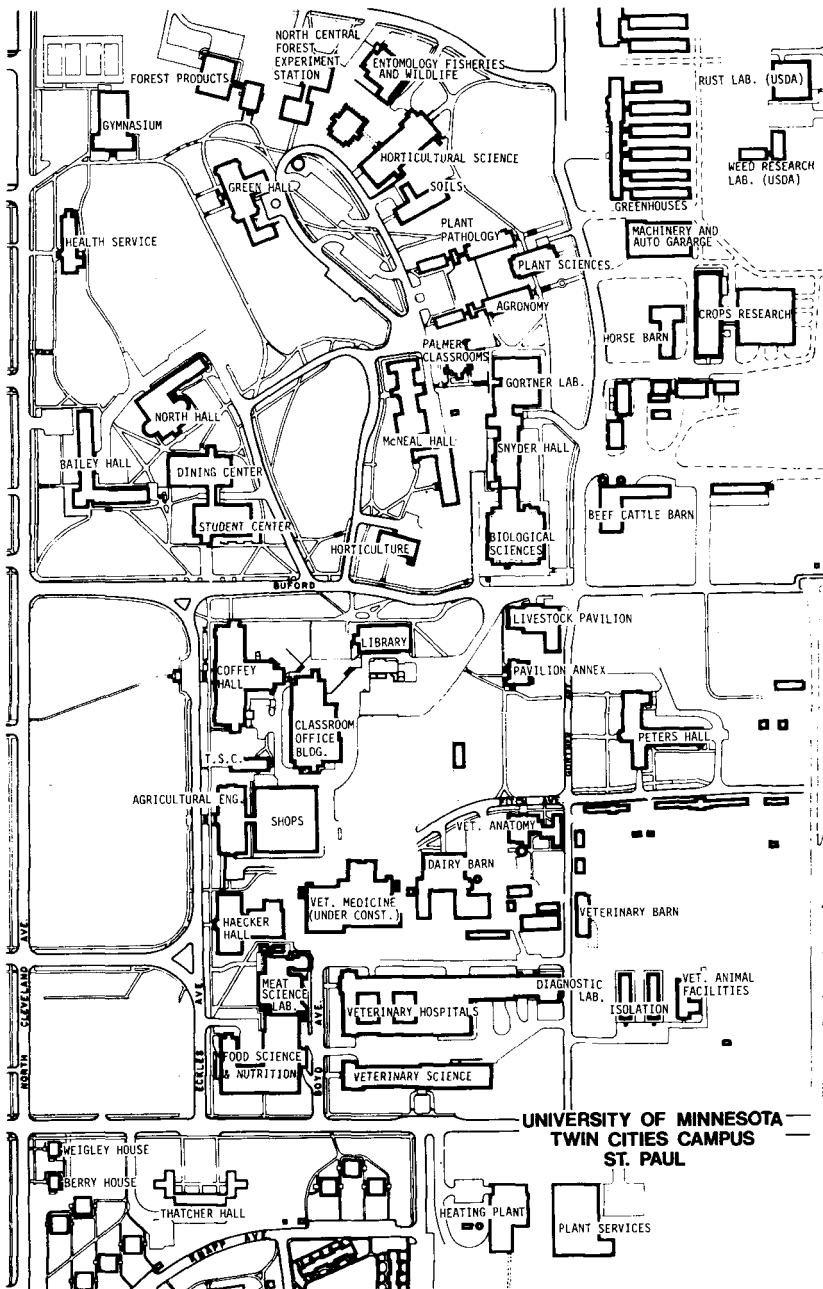
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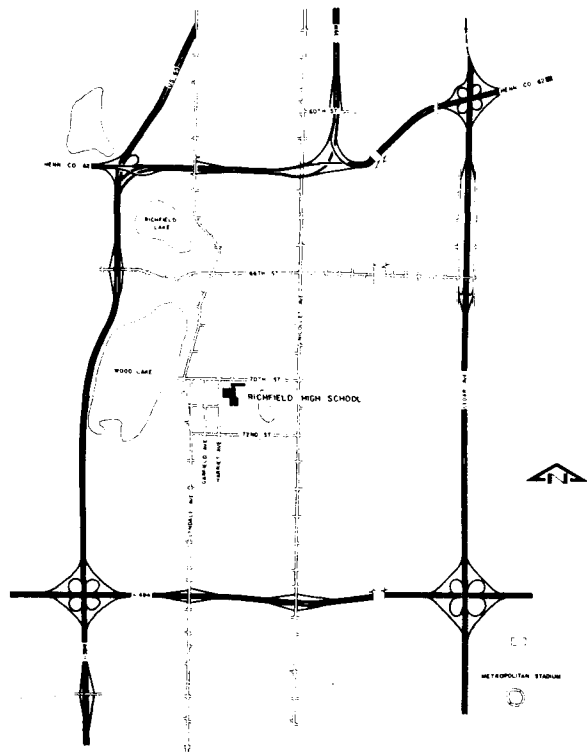
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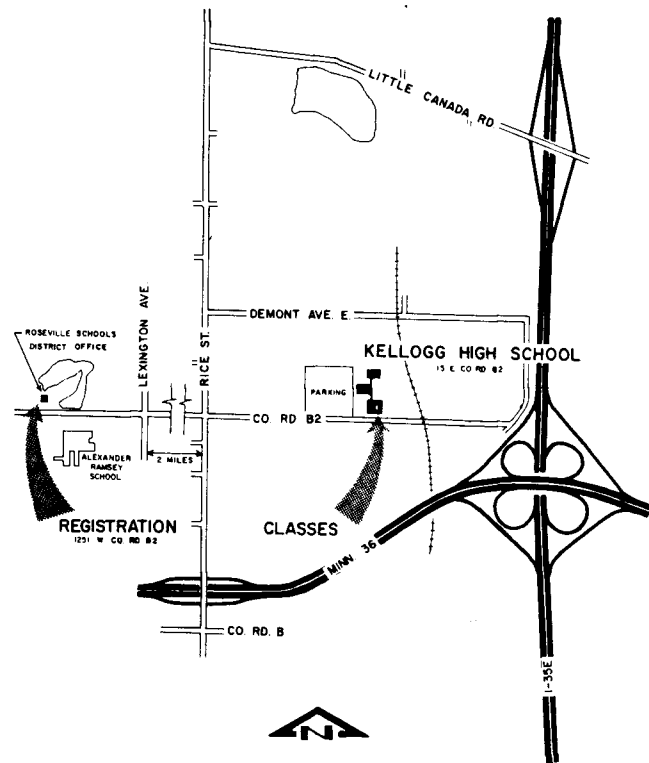
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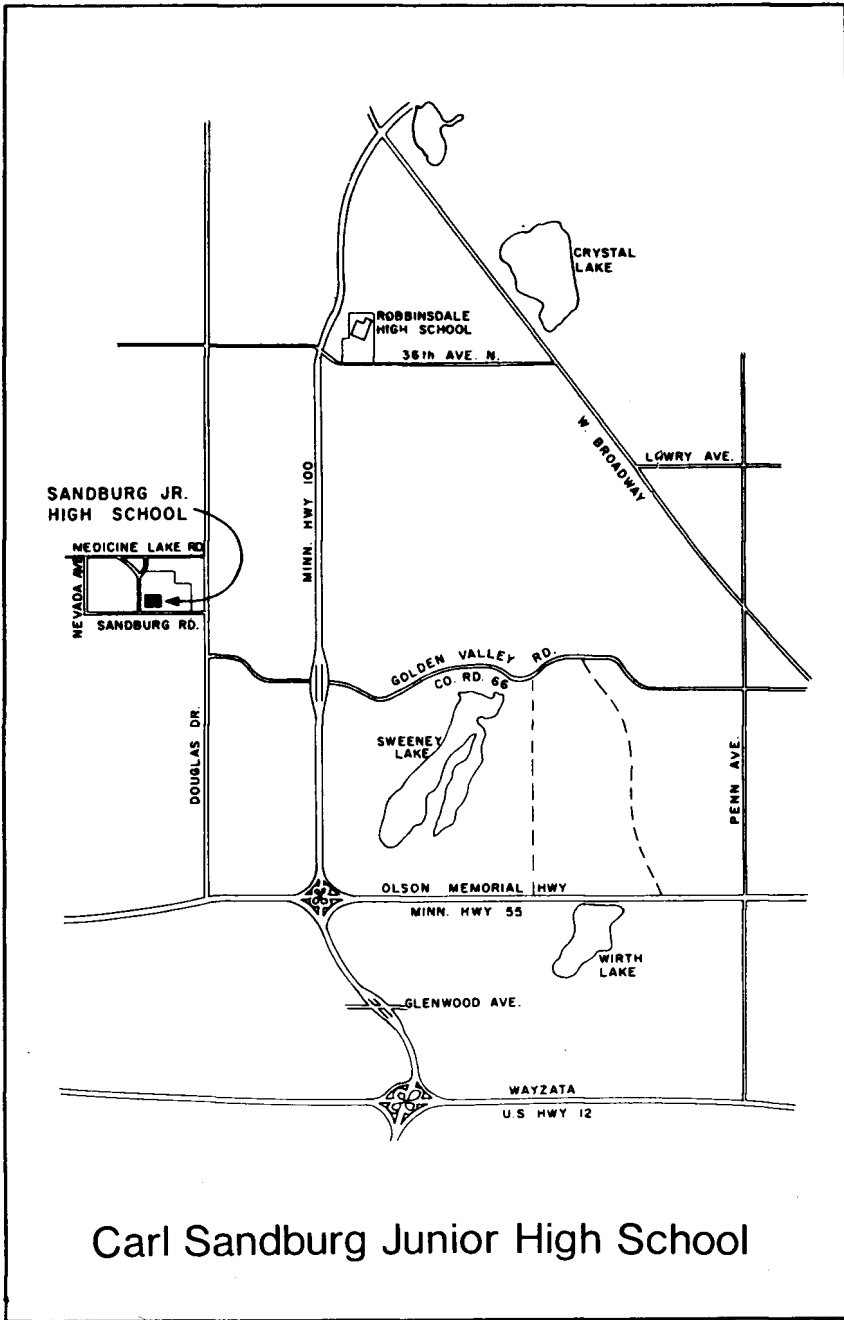




RICHFIELD DISTRICT OFFICE
(Richfield Senior High School)



ROSEVILLE DISTRICT OFFICE
(Kellogg Senior High School)



Carl Sandburg Junior High School

department abbreviations

Accounting	Acct	Insurance Institute of America	Iia
Adult Psychiatry	AdPay	American College of Life Underwriters	CLU
Aerospace Engineering and Mechanics	AEM	Italian	Ital
Afro-American Studies	Afro	Japanese	Jpn
American Indian Studies	Amin	Jewish Studies	JS
American Studies	AmSt	Journalism and Mass Communication	Jour
Anatomy	Anat	Laboratory Medicine	LMed
Anthropology	Anth	Landscape Architecture	LA
Arabic	Arab	Latin	Lat
Architecture	Arch	Library Science	Lib
Art Education	ArEd	Linguistics	Ling
Art History	ArtH	Management	Mgmt
Art, Studio	ArtS	Management Information Sciences	MIS
Astronomy	Ast	Marketing	Mktg
Biology	Biol	Mathematics	Math
Botany	Bot	Mechanical Engineering	ME
Business Administration	BA	Medical Technology	MedT
Business Law	BLaw	Metallurgical Engineering	MetE
Chemistry	Chem	Microbiology	MicB
Child Psychology	CPsy	Middle Eastern Languages	MidE
Chinese	Chn	Music	Mus
Civil and Mineral Engineering	CE	Music Education	MuEd
Classics	Cias	Natural Science and Technology	NSci
Communication	Comm	Norwegian	Nor
Composition	Comp	Nursing	Nur
Computer, Information, and Control Sciences	CICS	Operations Analysis and Management	OAM
Counseling and Student Personnel Psychology	CSPPP	Personal Orientation	PO
Criminal Justice Studies	CJS	Philosophy	Phil
Danish	Dan	Physical Education and Recreation	PE
Design	Dsgn	Physical Medicine and Rehabilitation	PMed
Dutch	Dut	Physics	Phys
East Asian Languages	Eas	Plant Pathology	PIPa
Ecology	Ecol	Political Science	Pol
Economics	Econ	Psychological Foundations	PsyF
Educational Administration	EdAd	Psychology	Psy
Electrical Engineering	EE	Public Health	PubH
Elementary Education	Elem	Quantitative Analysis	QA
Engineering Graphics	EG	Real Estate	RE
English	Engl	Religious Studies	RelS
Extension Classes	EC	Rhetoric	Rhet
Family Social Science	FSOS	Russian	Russ
Finance (business)	BFin	Salesmanship	Sal
Finnish	Fin	Scandinavian	Scan
Food Science and Nutrition	FScN	School Health Education	HiH
Forest Products	ForP	Secondary Education	SeEd
Forest Resources Development	FRD	Social Science	SSci
French	Fren	Social Work	SW
General College	GC	Sociology	Soc
Geography	Geog	Soil Science	Soils
Geology and Geophysics	Geo	Spanish	Span
German	Ger	Special Education	SpEd
Hebrew	Heb	Speech-Communication	Spch
History	Hist	Swedish	Swed
Horticultural Science	Hort	Theatre Arts	Th
Humanities	Hum	Transportation	Tran
Indic	Indc	Veterinary Medicine	VM
Industrial Engineering/Operations Research	IEOR	Women's Studies	WoSt
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Institute of Technology	IT		
Insurance	Ins		

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Register by MAIL

We wish 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 36**.

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. Registration forms will not be mailed out after the registration period has ended.

Note: In the event that your first limited course preference is closed, please indicate a second or third preference by placing a number in the choice column below.

Request postcard



PLEASE DETACH AND MAIL . . .

LIMITED CLASSES FILL IN SPACES BELOW (SEE SAMPLE) FOR EACH LIMITED CLASS REQUESTED

UNLIMITED CLASSES

Choice	Department	COURSE NO.	TERM *	SEC NO.	DAY	TIME	BUILDING & ROOM NO.
Sample	ECON	1-001	F.S.	2	M	6:20	BLEGH 430

INDICATE HOW MANY REGISTRATION FORMS IN EACH BOX

Qtr, Sem
Sp Term



Special Classes
(Recreation, 1/2 tuition, 60 or over, youth 12-16)

TELEPHONE:

HOME

BUSINESS

EXTENSION

PLEASE PRINT

Name

Street Address

City

State

Zip Code

- I am registering under the G.I. Bill
- My tuition and fees are to be billed to a company, scholarship or the military.
- Athletic Facilities
- Health Service



Summer '75

**PUT SOME CLASS
IN YOUR SUM-**

MER EVENING! Summer is a pleasant time on campus . . . quiet . . . casual. Enroll for a 5 or 10-week summer extension class. Courses will be scheduled in . . . American Studies . . . Accounting . . . Psychology . . . Studio Arts . . . Humanities . . . Economics . . . and more. A descriptive brochure will be available by April 15. Call 373-3195.

EXTENSION INDEPENDENT STUDY

1974-75 Bulletin



 Continuing Education & Extension
UNIVERSITY OF MINNESOTA

LEARNING THROUGH INDEPENDENT STUDY

The Department of Independent Study is pledged to extend the resources of the University into the community. And in a way no other method can, independent study brings the University to the student by offering him the opportunity to study wherever he is, whenever he has the time. The process is simple: using a variety of media, students prepare assignments and submit them, along with any questions they may have, to their instructor. The instructor then evaluates the work, returning it promptly with his comments and the answers to any questions raised by the student. With their first exchange, student and instructor develop a personal relationship which often goes beyond course content and lasts long after the course is finished.

An essential quality of independent study is its flexibility: the student may enroll in a course at any time and work at his own pace; the instructor may modify a course for individual students according to their backgrounds, interests, and progress; an individual may carry on an educational program while earning a living, caring for a family, traveling, or participating in other activities.

In return for such flexibility, independent study asks something from the student: motivation and self direction. Responsibility for individual progress lies completely with the student, and he is the one who decides upon and finally achieves or does not achieve his own educational objectives. For the student who can meet the challenge, the rewards are great: a truly satisfying and individualized learning experience.

Historically, what is now referred to as independent study was originally called "correspondence study." Highly successful in meeting the educational needs of millions of students, correspondence courses have, in the past, been shunned by many as too rigid, too difficult and somehow less prestigious than on-campus study. With the advent of new media and a greater understanding and respect for self-directed learning, however, the traditional correspondence course has blossomed into a better and more valuable learning tool than ever before. As a result, "Correspondence Study" departments all over the country (including Minnesota's) have changed their names to "Independent Study" to reflect both changes which have already taken place and a continuing emphasis on future innovation.

More than five million students in the United States today are enrolled in independent study through correspondence. For these people, independent study obviously *does* fill an educational need which they either cannot or do not wish to fill in any other way. It is for them that the University of Minnesota will continue to provide, as it has since 1909, quality independent study opportunities.

EXTENSION INDEPENDENT STUDY

1974-75 Bulletin



 Continuing Education & Extension
UNIVERSITY OF MINNESOTA



The idea that our major public universities have a clear responsibility to serve large numbers of people with diverse educational backgrounds and goals is not new. It has been at the heart of American public higher education for almost a century.

But while the University of Minnesota has long had the good fortune of providing educational services to hundreds of thousands of persons, we have only begun to see and appreciate the true potential in the area 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 — a growing number of Americans will enroll in these programs in the years immediately before us. This is encouraging primarily because it is an educationally stimulating development both for our institutions and for our students.

I look forward to the continued growth of the University of Minnesota's Continuing Education and Extension programs.

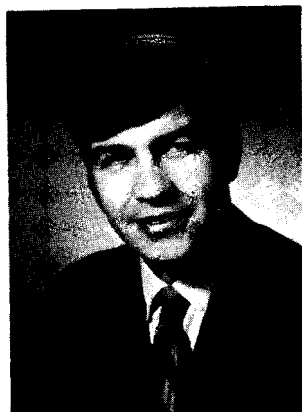
C. Peter Magrath

President,
University of Minnesota

Students who elect to continue their education through Independent Study are very special persons. 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. Each is in a class by himself.

Harold A. Miller

Dean,
Continuing Education and Extension



UNIVERSITY OF MINNESOTA

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The Board of Regents has committed itself and the University of Minnesota to the policy that there shall be no discrimination in the treatment of persons because of race, creed, color, sex, or national origin. This is a guiding policy in the admission of students in all colleges and in their academic pursuits. It is also a governing policy principle in University-owned and University-approved housing, in food services, and in student and staff services. This policy must also be adhered to in the employment of students either by the University or by outsiders through the University and in the employment of faculty and civil service staff.

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Instructional Systems

Department of Independent Study, 25 Wesbrook Hall, Roger G. Young, Director
Conferences, Nolte Center, M. Alan Brown, Director
Counseling, 314 Nolte Center, Vera Schietzer, Director
Duluth Continuing Education and Extension Center, 431 Administration Building, Duluth 55812, James Kafka, Director
Extension Classes, 170 Wesbrook Hall, Theodore L. Campbell, Director
Morris Continuing Education and Regional Programs, 227 Engineering Building, U of M, Morris 56267, Russell May, Director
Rochester Continuing Education and Extension Center, Building 4, 2120 East Center Street, Rochester 55901, Dean Swanson, Acting Director
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Continuing Education in the Arts, 320 Wesbrook Hall, Dale D. Huffington, Director
Continuing Business Education, 334c Business Administration Building, H. Merrell Arnold, Director
Continuing Education in Dentistry, 4 Owre Hall, Robert Jeronimus, Director
Continuing Education in Education, 101 Burton Hall, Reynold Willie, Director
Continuing Education in Engineering and Science, 11 Mines-Metallurgy, M. Nicholson, Director
Continuing General College Education, 106 Nicholson Hall, Dewain Long, Director
Continuing Legal Education, 338 Nolte Center, John Wirt, Director
Continuing Medical Education, 297 Nolte Center, Douglas A. Fenderson, Director
Continuing Pharmacy Education, 118 Appleby Hall, Thomas McKennell, Director
Continuing Education in Social Work, 321 Nolte Center, William Hoffman, Director

Community Relations and Extension Services

Audio-Visual Library Services, 3300 University Avenue, Willard D. Philipson, Director
Civil Defense Education Program, 1633 Eustis Street, St. Paul, Robert Elliott, Director
Community Programs, 202 Wesbrook Hall, Carol L. Olson, Director
Community Resource Development Program, 150 Wesbrook Hall, Dean's Office
Continuing Education in Public Policy, Government, and World Affairs, 331 Nolte Center, William Rogers, Director
Continuing Education for Women, 200 Wesbrook Hall, Edith Mucke, Director
Delinquency Control Program, Temporary North of Mines, Richard Clendenen, Director
Fire-Service Information, Research, Education, 3300 University Avenue S.E., Frank E. Oberg, Director
Head Start and Early Childhood Studies, 321 Nolte Center, William Hoffman, Director
Labor Education Service, 571 Business Administration, John J. Flagler, Director
State Organization Service, 3300 University Avenue S.E., William Rogers, Director

HOW TO ENROLL IN INDEPENDENT STUDY

1. Read carefully the General Information section of this bulletin. You are responsible for all rules and information contained there, so it is to your advantage to read and understand it before enrolling.

2. Choose a course or courses for which you wish to enroll, and fill out the registration blank in the center portion of this bulletin. If you are working toward a degree or certificate and plan to apply credits earned through Independent Study toward that program, check, before enrolling, with your advisor, a college counselor, or the Extension Counseling Office, 314 Nolte Center, regarding the applicability of Independent Study credits to your particular specialization.

3. Send or bring in the completed registration blank, full or partial payment and, if applicable, out-of-state fee, payment for airmail postage and other information requested for special types of enrollment to:

Department of Independent Study
45 Wesbrook Hall
University of Minnesota
Minneapolis, MN 55455

Make checks or money orders payable to the University of Minnesota.

4. As soon as your enrollment is processed, you will receive lesson materials and a study guide listing the texts and materials necessary to complete your course. Obtain required texts and materials from your local library or bookstore, from the publishers, from the Nicholson Hall Bookstore (Room 7) on the Minneapolis campus of the University, or by mail from the Department of Independent Study. When ordering from the Department of Independent Study, be sure to use the book order form included with your lesson materials.

5. If you have any questions or comments about your instructor, the study guide, lesson procedures or other aspects of your course, please call or write the Department of Independent Study. Phone: (612) 373-3256.

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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.

To enroll in an Extension Independent Study course, you need only complete and submit, along with the appropriate fees, the registration form found in the center of this bulletin. Additional registration forms are available on request.

COURSE DESCRIPTIONS

Courses in this bulletin are listed under departmental or subject headings, alphabetically arranged. Where several classifications are possible, cross references are given. Please refer to the index at the back of this bulletin for additional help in locating courses.

It is important to understand the course description format; it can help you choose the most appropriate course and will enable you to complete the registration form properly. A sample course description on page 58 indicates the information that may be found in all course descriptions listed in this bulletin. Additional information can be obtained by writing to the Department of Independent Study for an introduction to the study guide. The introduction provides complete information regarding course requirements, topics covered, grading procedures, textbooks, and examinations. The form used to request a study guide introduction is included in the back of this bulletin.

Opposite: Registrations are accepted throughout the year at Independent Study. Register in person on the Minneapolis Campus, or by mail, using the form inserted in this bulletin.

General Information

COURSE NUMBERING

In the fall of 1970, the University of Minnesota instituted a four-digit course numbering system in which the first number indicates the credit level of the course. This numbering system is coded as follows:

- 0001 to 0998 Certificate or noncredit courses. Certificate credit course numbers are followed by a "C".
- 1000 to 1998 Lower division courses designed primarily for freshmen and sophomores.
- 3000 to 3998 Upper division courses designed primarily for juniors and seniors; (also open to other students with at least a C average overall and the necessary prerequisites).
- 5000 to 5998 Graduate level courses designed primarily for juniors, seniors and graduate students. NOTE: 5000 level courses taken through Independent Study will not be accepted for credit in the University of Minnesota Graduate School.

CREDITS

The University of Minnesota uses the quarter hour as the basis of credit evaluation. The ratio between the quarter hour and the semester hour is approximately as follows:

2 quarter hours	= 1½ semester hours
3 quarter hours	= 2 semester hours
4 quarter hours	= 2⅔ semester hours
4½ quarter hours	= 3 semester hours
5 quarter hours	= 3⅓ semester hours

All credits listed in this bulletin are quarter-hour credits.

The following credit designations are used in the course descriptions in this bulletin:

1. **Degree credit** — credit earned may be used in a degree program. Check the policy of your college concerning the acceptability of Extension Independent Study credits toward a degree program. University of Minnesota students should consult an adviser in their major department. (For more information, see **Degree Candidates and University Degree Programs**)

2. **Certificate credit** — credit earned may be used in appropriate 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**)
3. **No credit** — no credit is given for the course although grades may be assigned. (See also **Enrolling in Credit Courses on a Non-credit Basis**)

It is important, when filling out the Independent Study registration form, that you indicate clearly in the "credit" column the type of credit (outlined above), as well as the number of credits the course carries.

Ways to Earn Credit through Independent Study

There are four ways to earn credit through Independent Study:

1. **Lesson method** — The lesson method is based on the traditional correspondence format, although in many courses the communication and study processes have been enhanced by the use of additional media such as audio cassettes. 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. The study guide's main purposes are to provide a format and structure for your independent study and to initiate and maintain communication between you and your instructor. Using the study guide, textbooks, and other materials, you complete at your own pace a series of assignments for evaluation by your instructor. In some courses, your assignments and the instructor's evaluation may be taped instead of written. In most courses, you must successfully complete one or more mid-course 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. **If you do not indicate specifically on your registration form that you want to earn credit using either the credit-by-examination method or the honors alternative (see below), you will be enrolled automatically in Independent Study on a lesson method basis.**

2. **Contract Alternative** — This method may be used only for courses listed in this bulletin. Less structured than the lesson method described above, this method provides more freedom by exempting you from submitting all of the lesson assignments. Instead, you propose a project that you will complete in lieu of lesson assignments.

The work to be submitted for evaluation will vary widely depending upon the course content and your interests and abilities. You may be

General Information

required to submit only the project agreed upon with your instructor and will be given almost complete responsibility for its preparation, or you may be required to submit a limited number of assignments in addition to the special project. To receive credit for the course, 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.

To enroll under the contract alternative 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 Deborah Nelson, Assistant Director, Department of Independent Study, 69A Westbrook Hall, University of Minnesota, Minneapolis, Minnesota 55455. Based on your interests, abilities and the subject to be studied, the Assistant Director, in consultation with the instructor, will decide either to approve contract-alternative enrollment, to recommend lesson-method enrollment, or 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 enrollment may also be initiated by instructors who decide, based on the quality of regular lessons submitted, that a student may benefit from a more flexible study arrangement. While your instructor may make such a recommendation, it is up to you to decide whether or not to change to the contract-alternative enrollment. Enrollment for the contract alternative carries full tuition.

3. Credit by Examination — Similar to the honors alternative, the credit-by-examination method allows you to prepare on your own for a final examination, the passing of which entitles you to credit for the course. This method may be used only for courses listed in this bulletin. You will receive a study guide upon acceptance of your registration, and you will be expected to obtain all required texts and materials. You will not, however, be allowed to submit work for your instructor's evaluation before writing the examination. The credit-by-examination method is designed primarily for students with extensive background in a specific area who wish mainly to reorient their practical experience to an academic framework in order to earn certificate or degree credit. This method is not recommended for students who do not have substantial prior knowledge in a subject area. If you wish to enroll for credit by examination you should send your application blank, **a transcript** (if previous college courses have been taken), a letter explaining your qualifications for such enrollment, and the name and address of the person who will proctor the examination to Deborah Nelson, Assistant Director, Department of Independent Study, 69A Westbrook Hall, University of Minnesota, Minneapolis, Minnesota 55455. Your request **will not be considered** unless it is accompanied by

General Information

a transcript and a letter describing your qualifications. Based on this and any other information that may be requested, the Assistant Director, in consultation with the course instructor, will decide whether or not you have sufficient background to earn credit by examination. If the application is accepted, you will be asked to pay the special examination fee of \$25 (\$20 for the examinations, plus \$5 for course materials) and to inform the Department of Independent Study when you are ready to take the examination so that it may be sent to your proctor. Ten dollars plus \$5 for the course materials is nonrefundable. If your application is not accepted, you will be asked to pay full tuition and enroll in the course on a lesson-method basis.

4. **Directed Study** (Individual Study). This method is suggested for courses **not** listed in this bulletin.

OPTION I: GENERAL COLLEGE

This method for earning credits, available to Independent Study students through the General College, 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, you must complete the Individual Study Proposal form, available by writing Deborah Nelson, Assistant Director, Department of Independent Study, 69A Westbrook Hall, University of Minnesota, Minneapolis, Minnesota 55455. After completing the form, please return it to Ms. Nelson, and it will be forwarded for consideration to an appropriate General College faculty member. If the proposal is approved, the Department of Independent Study will send you a registration form that you are to complete and return along with your tuition check of \$15.00 per credit. You will then work on the project under the guidance of your assigned faculty member, though you will work largely on your own initiative and at your own speed. As with other Independent Study courses, you will have up to one year to complete your work before your registration expires. Credit assignments vary, but normally you can count on 30 hours of work for each quarter credit. You may register for either the A-N or the S-N grading system.

OPTION II: UNIVERSITY COLLEGE

University College can grant up to 15 credits to any student for an independent undergraduate study project done outside the confines of formal course work. The student need not be a University College registrant; however, he must have permission from his college office to pursue a program of independent study in University College. He must also have an appropriate faculty member supervise his project. Ordinarily, projects that can be done through **departmental** readings courses or directed studies projects are not acceptable for UC 3075.

General Information

Projects requiring cross-disciplinary study are most appropriate for this option. 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).

Resident Credit

Degree courses described in this bulletin parallel or are equivalent to courses with the same title and course number offered on the University of Minnesota campus. Credits earned through Extension Independent Study may be applicable to an undergraduate degree from the University of Minnesota. Students wishing to apply credits to a University of Minnesota degree program should carefully read the Degree Candidates, University Degree Programs, and Transcripts sections of this bulletin.

Graduate Credit

Credits earned through Extension Independent Study are not acceptable 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.

Enrolling in Credit Courses on a Non-Credit Basis

Any course listed in this bulletin, whether offered for credit or not, may be taken on a non-credit basis by simply indicating "NC" in the credit section of the registration form. In some cases, an individual instructor may take into account, in his grading or lesson requirements, that a student has an objective other than degree or certificate credit. Usually, however, instructors will expect the same quality of work and will grade both credit and non-credit students on the same basis. You may not change from a non-credit to a credit registration once you have begun submitting lessons.

DEGREE CANDIDATES

(See also University Degree Programs)

It is possible, through Extension Independent Study, to work on a variety of degrees at the University of Minnesota. There may be limitations, however, on the use of Independent Study credits in degree programs in certain major departments or individual schools. If you

General Information

wish to apply credits earned through Independent Study to a University of Minnesota degree program you are urged to consult an academic advisor or college administrator before enrolling.

If you have never been admitted to the University of Minnesota but wish to work toward a University of Minnesota degree, you should contact the Extension Counseling Office, 314 Nolte Center, University of Minnesota, Minneapolis, Minnesota 55455 as early in your planning as possible. 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 Service Bureau, S-1 Morrill Hall, University of Minnesota, Minneapolis, Minnesota 55455.

Officials at other colleges or universities determine which Independent Study courses will be accepted to fulfill degree requirements at their institutions. To receive credit at another institution for courses taken through Independent Study, you should therefore obtain prior approval from that institution before enrolling. A transcript of courses taken through Independent Study will be sent to other colleges and universities by sending your name, address, and the name of the institution to which the transcript should be sent to:

Extension Transcripts Department
Window 17
105 Morrill Hall
University of Minnesota
Minneapolis, Minnesota 55455

Students at the University of Minnesota or elsewhere must take full responsibility for meeting graduation or certification deadlines. All lessons and examinations must be completed at least three weeks before the date on which the final grade must be recorded for graduation or certification. This is especially important during May, June and September when, because many students are completing courses, the recording process is somewhat slower than at other times. Students with special time limitations should check with the Department of Independent Study **before** enrolling. (See also Time Limitations)

DISCONTINUED COURSES

The unavailability of materials, books or instructors sometimes makes it necessary to discontinue accepting enrollments in an Independent Study course. Tuition received for registration in courses cancelled since this bulletin was published will either be refunded or, if requested, transferred, free of charge, to another course with an equal number of credits.

General Information

EXAMINATIONS

Most Independent Study courses include a final examination and one or more mid-course quizzes. Examinations 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.

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):
Duluth: 431 Administration Building, 726-8113
Minneapolis: MacPhail Center, 1128 LaSalle, 332-4424
Morris: 226 Engineering Building, 589-1464
Rochester: 2120 E. Center Street, Building 4, 288-4584
Wadena: 411 Colfax Avenue Southwest, (218) 631-2413
3. The Independent Study Department of any member institution of the National University Extension Association. (A list is available on request)
4. A school superintendent, principal, or counselor; a college instructor or administrator.
5. A commissioned officer whose rank is higher than your own. (For students in the military only)

The Department of Independent Study reserves the right to reject any supervisor. Regardless of his academic qualifications, no relative may proctor an examination. No proctor fees are authorized.

One or more **Request for Examination** forms are included in the study guide for each course. 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

Thirty certificate programs have been developed and are offered by Continuing Education and Extension. They are generally regarded by business and industry as valuable preparation for employment and promotion and are designed for those who do not wish to pursue a regular degree program. For more information and a detailed listing of requirements, see the special section in this bulletin, **Extension Certificate Programs**.

LIBRARY AND AUDIO-VISUAL FACILITIES

Extension Independent Study students are urged to use their local library resources for both supplementary and required reading in their courses. If their local public school or college library is unable to supply the needed books or materials, the following library and resource facilities are also available:

Loan Library — The Department of Independent Study operates a small loan library from which required and recommended books for some courses may be rented. The study guide for each course indicates any books available for that course 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 observe the library courtesy of returning books when due so they may be used by other students who need them. No library books can be sent overseas.

University of Minnesota Libraries — Independent Study students are entitled to borrow books from the University of Minnesota libraries. These include the St. Paul Campus Library, Walter Library on the East Bank of the Minneapolis campus, and Wilson Library on the West Bank of the Minneapolis campus. Independent Study students are subject to all library regulations including those covering loan periods, fines on overdue books, and the recall of books needed by other students or for course reserves. Students borrowing in person must present a current fee statement (the student's copy of the registration form) when checking out books. Students wishing to borrow by mail should fill out the request form sent with their course materials and return it to the Circulation Department, Wilson Library, University of Minnesota, Minneapolis, Minnesota 55455. Library loans by mail are subject to all library regulations and must be returned on demand. No library books can be sent overseas.

Audio Visual Extension — The Department of Audio Visual Extension provides audio visual library services for assistance in the use of nonprint and print media as a learning resource. A film library housing

General Information

over 8,500 titles (20,000 prints), an audio tape library of 3,000 subjects, and a library of other nonprint subjects are available on a fee basis as an educational resource for patrons. Extensive bibliographic data and reference service are also provided on request. Limited preview facilities and equipment are available on the departmental premises. For more information and a catalog of available resources, contact the Librarian, Department of Audio Visual Extension, 3300 University Avenue S.E., Minneapolis, Minnesota 55455; telephone: (612) 373-5452.

Language Laboratory — The University of Minnesota Language Laboratory and Instructional Resource Center houses over 5000 audio tapes for student use. Tapes are available on cassette or reel-to-reel and include not only a wide variety of language materials but also supplemental tapes for use in music, social sciences and other disciplines. Independent Study students are eligible to use the language laboratory and/or to borrow materials on a long-term loan basis upon presentation of a paid fee statement (the student's copy of the completed registrar form). Students wishing to borrow materials by mail should fill out the request form sent with their course materials and return it directly to the Language Laboratory. For more information regarding materials relevant to your course, check with your instructor or contact the language laboratory. The address and hours of both the St. Paul and Minneapolis resource centers appear below:

Language Laboratory

204 Walter Library
University of Minnesota
Minneapolis, Minnesota 55455

hours: 8 a.m. — 10 p.m. M-Th
8 a.m. — 6 p.m. Fri.
9 a.m. — 6 p.m. Sat
Closed — Sun
phone: (612) 373-2538

Instructional Resources Center

2nd Floor, Temporary South of Coffey
University of Minnesota
St. Paul, Minnesota 55101

hours: 8 a.m. — 8 p.m. M-Fri
Closed — Sat. and Sun.
phone: (612) 373-1623

FACULTY

Instructors for all Extension Independent Study credit 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 of Minnesota, although faculty members from other colleges and universities, or specialists in professional and business fields, also teach Independent Study courses. A complete listing of the faculty of the Department of Independent Study follows the course description section of this bulletin.

FEES

Tuition and Out-of-State Fees

Tuition for Independent Study courses is \$15 per credit. A 3-credit course, therefore, costs \$45, a 4-credit course \$60, and a 5-credit course \$75. 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 Materials.**) Students who are not residents of Minnesota or Wisconsin must pay an additional \$3.00 fee per course. Wisconsin residents are exempt because of the Minnesota-Wisconsin Reciprocal Education Agreement. If you wish your lessons to be sent airmail, money for extra postage must be added to the cost of tuition. (See explanation of postage fees below.) Checks or money orders should be made payable to the University of Minnesota, and students must register for Independent Study courses directly with the Department of Independent Study. Independent Study has no commercial agents in this country or abroad.

Postage

Students pay postage on all mail sent to the Department of Independent Study; return mail is paid by the Department at surface mail rates. Foreign or American students may arrange for lessons, or texts and materials, or both to be sent airmail by enclosing a special fee with their registration. Overseas students who do not arrange for airmail postage may encounter considerable delay and possible loss of delivery.

Foreign or American students who wish **corrected lessons** returned by airmail or other rapid-service mail should remit the following amounts in addition to the tuition for each course:

Africa	\$12.50	Central America	\$7.50
Near and Far East	12.50	Canada	5.00
Europe	7.50	Mexico	5.00
South America	7.50	United States	5.00

General Information

Any balance remaining after the completion of a course will be refunded.

Students in the United States and Canada who wish **texts and materials** sent airmail should remit \$5.00 in addition to the tuition for each course. Overseas students should remit \$10.00 per course. Any balance remaining after postage has been paid will be refunded. Indicate clearly on the registration blank the purpose for which additional payment for postage is included.

Refunds

If you wish to cancel your registration in a course, a partial refund of your tuition may be requested, providing you do so within three months of the date of registration and prior to the completion of half the lessons in the course. Twenty-five percent of the cost of the course, and \$2.50 for each lesson evaluated, are nonrefundable. The service charge and first payment under the partial payment plan are also nonrefundable. If you have made the second payment under the partial payment plan, however, you may receive a refund in the same manner as other Independent Study students. (See complete explanation of Partial Payment Plan under **Financial Assistance**.)

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 reinstate your enrollment for one year for a fee of \$10.00. Reinstatements should be requested before enrollment expires, and the reinstatement fee must be paid before additional lessons can be submitted. If arrangements to reinstate are not made within 30 days after expiration date of your original enrollment, you will be allowed to complete the course only by re-enrolling with full tuition fees.

If a course is not completed by the expiration date of the reinstatement, you must receive special permission from the Director of the Department of Independent Study for a second reinstatement.

Transfer of Registration

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 25 percent of the cost of the first course, plus \$2.50 for each lesson evaluated. The balance of the original fee 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 as explained above. When a transfer is recommended by the Department of Independent Study, there is no charge except for lessons evaluated by the instructor.

Transfers are allowed only once per registration and cannot be made from one individual to another.

FINANCIAL ASSISTANCE

The following paragraphs describe some of the programs and methods through which financial aid for Independent Study can be arranged. Full-time students at the University of Minnesota should also contact the Office of Student Financial Aid, 107 Armory, University of Minnesota, Minneapolis, Minnesota 55455, regarding additional assistance opportunities.

Business firms — Many business firms are willing to help subsidize the education of their employees. Before enrolling, you are urged to talk with your company's personnel 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, Centennial Office Building, St. Paul, Minnesota 55101; telephone: (612) 296-2891.

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 be Minnesota residents, and eligibility for tuition assistance is based on monthly net income, number of dependents and special expenses. For information, call 376-4500 or write to the Department of Independent Study, 25 Wesbrook Hall, University of Minnesota, Minneapolis, Minnesota 55455.

Prisoner's Tuition Assistance Fund — The Department of Independent Study has available limited funds to help offset the cost of Independent Study tuition for those confined to Minnesota State correctional institutions. Persons interested in obtaining such assistance should send a letter of application to Roger Young, Director, Department of Independent Study, 33 Wesbrook Hall, University of Minnesota, Minneapolis, Minnesota 55455.

General Information

Prisoners are also urged to consult their prison education officer about possible financial aid available through their own institution.

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, with veterans receiving 1½ months of eligibility for each month or part of a month of active service after that date. Maximum period of training is 36 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, University of Minnesota, Minneapolis, Minnesota 55455, telephone: (612) 373-3822.

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 \$30.00 or more. Texts and materials ordered through the Department of Independent Study must be paid in full at the time of purchase, as must the out-of-state fee, if applicable.

Under this plan, 1/3 of the total tuition, plus a service charge of \$3.00 per course, is paid at the time of registration. The remaining 2/3 is payable in two equal monthly payments due 30 and 60 days after the date of registration.

Sample payment schedules:

Tuition	1st pmt (at registr.)	2nd pmt (30 days)	3rd pmt (60 days)
\$30 (2 cr @ \$15.00/cr)	\$13.00	\$10.00	\$10.00
\$45 (3 cr @ \$15.00/cr)	\$18.00	\$15.00	\$15.00
\$60 (4 cr @ \$15.00/cr)	\$23.00	\$20.00	\$20.00
\$75 (5 cr @ \$15.00/cr)	\$28.00	\$25.00	\$25.00

Instruction will not be received for any lessons submitted exceeding that percentage of the course for which tuition has been paid. Students enrolled in a three-credit course of 12 lessons, for example, will not receive instruction beyond lesson four if they have made only the first payment.

Registration will be cancelled if the total amount of the tuition has not been paid within 90 days of the original registration unless special permission has been obtained from the Director of the Department of Independent Study to extend the payment deadline. Once registration has been cancelled, you may continue a course only by re-enrolling.

The first payment and the service charge for partial payment is non-refundable. Students who have made the second payment, however, may request a refund or transfer to another course in line with the regular refund and transfer procedures. (See **Fees**)

Students wishing to use the partial payment plan should fill in the appropriate spaces on the regular registration form and send it, along with the service charge, the first payment, and any other special fees to the Department of Independent Study.

GRADES

The University of Minnesota employs two grading systems: the A-N system and the S-N system. You must indicate on your registration form the system by which you wish to be graded in each course, and you may not change to another system after you have begun submitting lessons. Certain courses may not be taken on an S-N basis; where this is so, it is indicated in the course descriptions in this bulletin. Reports of final grades earned in Independent Study are sent automatically to the student upon completion of each course.

A-N Grading System

In the A-N system there are four passing grades: A (highest), B, C, D (lowest). 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 to graduate from the University of Minnesota. Grading procedure 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 directed to Deborah Nelson, Assistant Director, Department of Independent Study, 69A Westbrook Hall, University of Minnesota, Minneapolis, Minnesota 55455.

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. (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.

General Information

Students wishing to take courses under the S-N grading system should be aware of the limitations placed on the system by the college from which a degree will be granted. 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 a particular grading system.

Students intending to apply Independent Study credits taken on the S-N basis toward a degree at the University of Minnesota should contact their college office or the Extension Counseling Office, 314 Nolte Center, University of Minnesota, Minneapolis, Minnesota 55455, before enrolling.

Up to 25 percent of the course credits may be presented toward completion of a Certificate Program. Students not working on a degree or certificate program, and not intending to later apply credits toward such a program, may elect the S-N system for any number of courses.

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, four grade points; B, three grade points; C, two grade points; D, one grade point; N, 0 grade points. A student's grade point average is determined by dividing the sum of grade points by the sum of credits attempted, both passed and failed. Credits attempted 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 cancel a course or who fail to complete their Independent Study work within the one-year time limit. Upon completion of all course requirements, students receive a grade report from the Office of Admissions and Records.

GROUP STUDY

(See Special Independent Study Programs)

GUIDANCE AND COUNSELING SERVICES

Independent Study students may obtain counseling by mail by writing:

Extension Counseling Office
314 Nolte Center
University of Minnesota
Minneapolis, Minnesota 55455
Phone: (612) 373-3905

General Information

The Extension Counseling Office offers both counseling and program advising services, without fee, to all students registered in or planning to register in courses offered by Continuing Education and Extension.

Program advising is available to help students select programs of study, determine prerequisites and standing, evaluate transcripts of previous college work, choose the kind and number of courses in which to enroll, evaluate the applicability of Independent Study credits to specific programs, and make decisions regarding participation in degree or certificate programs at the University of Minnesota.

In addition, professional counseling and testing services are available to students seeking help with personal problems, wishing to learn more about their own abilities and interests, or needing help with educational and vocational planning. A fee of \$15 is charged for students (\$25 for non-students) wishing to take a battery of tests.

The Counseling Office is located at 314 Nolte Center on the Minneapolis campus of the University of Minnesota and is open for appointments daily, Monday through Friday, from 9:00 to 12:00 a.m. and from 1:00 to 4:00 p.m. Evening appointments are also available Monday through Thursday from 5:00 to 8:00 p.m. and at other specified times during the fall registration period of each academic year.

HIGH SCHOOL STUDENTS

The Department of Independent Study offers approximately 45 courses for high school credit 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; or adults preparing for the General Educational Development (GED) tests for high school equivalency. Qualified high school students may, with permission of their local school authorities, take college-level Independent Study courses for credit.

Independent Study courses for high school students are approved by the State Department of Education and satisfy University of Minnesota entrance requirements. 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 also find it useful to take high school courses through Independent Study. Courses in English, mathematics, social studies,

General Information

and other subjects can serve as a valuable review for students preparing to take the examinations. Detailed information about the GED examinations in Minnesota may be obtained by contacting Mr. Donald A. Peterson, Coordinator, Community Education Section, State Department of Education, Capital Square Building, St. Paul, Minnesota 55101. (612) 296-4057.

LESSON SERVICE

The Department of Independent Study makes every effort to provide reasonable and prompt lesson service throughout the calendar year. Because some lapse of time is inevitable, however, in the handling and evaluation of assignments, students should allow at least one week between the time an assignment is received by the department 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.

Circumstances such as insufficient postage, no zip code, and the submission of a large number of lessons at one time may delay the return of lessons beyond the one week period. At certain times of the year, especially during the summer months when many lessons must be sent to off-campus addresses, lesson return may be somewhat slower. However, students 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.

LESSON SUBMISSION

One of the major advantages of Independent Study is that it permits students to progress at their own pace. Although the time required for preparation varies with the course and the individual, the average time required to read and prepare a written or taped assignment is between six and ten hours. Whether one or several assignments are submitted per week or month, more value will be derived from the course if assignments are completed on a regular schedule. For optimum learning, new assignments should not be submitted until after receiving the instructor's comments on assignments already submitted. Students should not hold assignments but should submit them as they are completed.

Generally, students should plan on a minimum of two weeks to complete each quarter-hour credit. A three credit course, therefore, would require a minimum of six weeks to complete. In addition, students should allow at least three weeks from the date the course is completed for the final grade to be recorded on their transcript in the office of Admissions and Records. Students with special time

General Information

limitations should check with the Department of Independent Study, before enrolling, about the feasibility of meeting their particular credit deadline.

An Independent Study course may be started at any time and completed within one year from the date of registration. For information on reinstating enrollments that have expired, see Reinstatements under **Fees**.

NEWSPAPER COURSES

(See Public Media Courses)

NUEA

(National University Extension Association)

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 64 colleges. It is available from the National University Extension Association, One Dupont Circle, Suite 360, Washington, D.C. 20036. For single copies, the cost is \$1.00.

OFFICE HOURS

The office of the Department of Independent Study 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:

September 2, 1974
November 28, 1974
November 29, 1974
December 24, 1974
December 25, 1974

Labor Day
Thanksgiving Day
Friday after Thanksgiving
Tuesday before Christmas
Christmas Day

January 1, 1975
February 17, 1975
May 26, 1975
July 4, 1975

New Year's Day
Presidents' Day
Memorial Day
Independence Day

The office is also open on the first and second Tuesday evenings of every month for examinations. Students wishing to arrange for an evening examination should call 373-3256 or write the Department of Independent Study.

General Information

OVERSEAS AND FOREIGN STUDENTS

(See also Military Personnel)

The Department of Independent Study welcomes registrations from foreign students or Americans living or traveling abroad. Since courses are available only in English, foreign students must have enough facility in English to be able to read and write assignments without difficulty.

The Department of Independent Study does not employ agents abroad. The student must mail his registration form along with payment for fees, books and other materials directly to the Department of Independent Study. For complete information regarding overseas lesson service and postage, see **Fees**.

Loan Library materials, records and certain other supplementary materials cannot be sent overseas. Where this is so it is noted in the study guide sent to each student upon registering.

PARTIAL PAYMENT PLAN

(See Financial Assistance)

POSTAGE

(See Fees)

PUBLIC MEDIA COURSES

Via Newspaper

Earn University credit by enrolling in a course offered through selected Minnesota newspapers and the Department of Independent Study.

Requirements for the course by newspaper include reading weekly newspaper articles and assigned readings, attending several seminars at the University, and taking a mid-term and a final examination. Tuition for this course is \$15 per credit.

Via Radio

The campus radio station KUOM 770, in cooperation with the Department of Independent Study, broadcasts degree credit courses each quarter. These courses are usually broadcast from 11:15-12:00 A.M. on Mondays, Wednesdays, and Fridays.

General Information

Tuition for these credit courses is \$15 a credit. To receive registration materials or further information on newspaper and radio courses, write: Department of Independent Study, 45 Wesbrook Hall, University of Minnesota, Minneapolis, Minnesota 55455, or call (612) 373-3256.

PURCHASE OF STUDY GUIDES

Students not wishing instruction or credit for an Independent Study course may purchase the study guide only at a cost of \$5.00. Requests for the purchase of guides should be sent with \$5.00 to the Office Supervisor, Department of Independent Study, University of Minnesota, Minneapolis, Minnesota 55455.

RADIO COURSES

(See Public Media Courses)

REFUNDS

(See Fees)

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 called Independent Study Plus. Special Independent Study Programs consist of the basic correspondence course supplemented by lectures by the instructor, video and/or audio tapes.

Special Independent Study Programs add 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.

Tuition and fees for Special Independent Study Programs are the same as those for regular Independent Study, although, depending on the size of the group, its distance from Minneapolis, and equipment used, it may sometimes be necessary to assess a nominal special fee.

Students wishing to discuss the possibility of Special Independent Study Programs in their school or community should call or write Anita Steinbicker, Coordinator, Department of Independent Study, 27 Wesbrook Hall, University of Minnesota, Minneapolis, Minnesota 55455; telephone: (612) 376-4987.

General Information

TAPES AND TAPE RECORDERS

The Department of Independent Study has available for loan a number of cassette recorders for use with those Independent Study courses that use audio tapes as required or optional materials. Cassette tape recorders may be borrowed for three months for a service fee of \$20.00 (\$15.00 is a non-refundable rental fee, and \$5.00 is refundable when the tape recorder is returned undamaged.) The loan period may be renewed for additional months for a fee of \$5.00 per month. Students will be charged a fine for use, without renewal, beyond the basic loan period and will be held responsible for any loss or damage to machines while in their possession or in transit back to the Department of Independent Study. Cassette recorders will not be sent overseas. For more information regarding cassette recorders on loan, call or write the Department of Independent Study, 45 Wesbrook Hall, University of Minnesota, Minneapolis, Minnesota 55455; telephone: (612) 373-3256.

TEACHER CERTIFICATION

Most Independent Study courses can be used in the acquisition and renewal of teachers' certificates. However, the Department of Independent Study only provides the courses and does not evaluate teaching or educational experience for a certificate or recommend courses.

Questions concerning teacher certification should be directed to the State Department of Education or a similar agency. (In Minnesota — Director of Teacher Certification and Placement, 6th Floor, Capitol Square Building, 10th and Cedar, St. Paul, Minnesota 55101).

TEXTBOOKS AND SUPPLIES

Textbooks and supplies needed for a course, and the procedure for ordering them, are explained in the study guide sent to the student upon registering. The tuition fee does not cover the cost of books and materials. Course descriptions in this bulletin list approximate book prices. Exact prices are listed in the study guide introduction, a copy of which will be sent upon request to students who wish to know more about a course before enrolling.

Students who wish to sell their books after a course is completed should contact Irene Phillips, Nicholson Hall Bookstore, Room 7, University of Minnesota, Minneapolis, Minnesota 55455; telephone: 373-3688. Only books in current use will be purchased. Please inquire before sending books.

TRANSFERRING TO ANOTHER COURSE

(See Transfer of Registration under Fees)

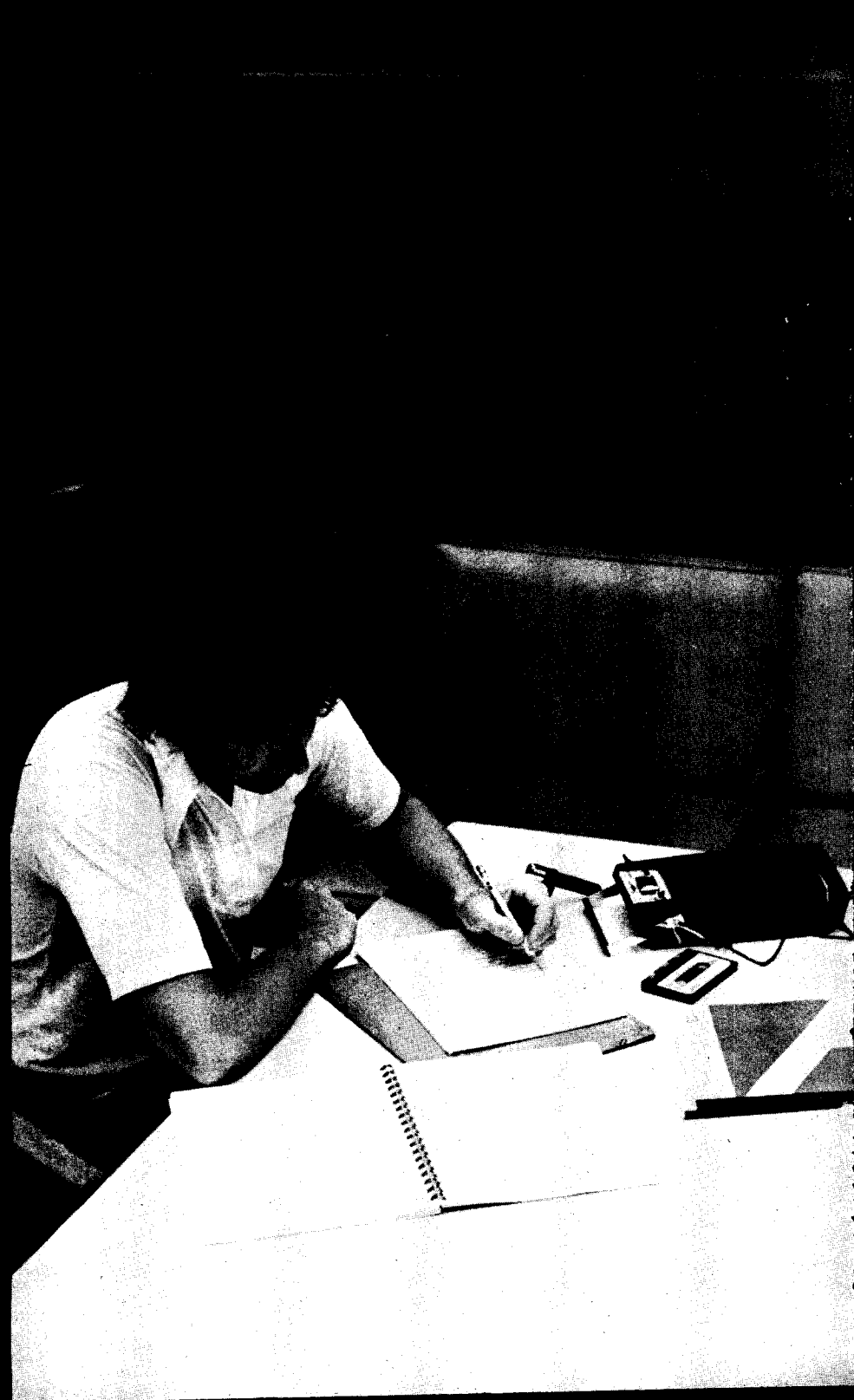
TRANSCRIPTS

An unofficial transcript is sent to each student upon completion of a course. An official transcript of work taken through Independent Study will be sent to other colleges and universities upon request. Students should send their name, address and the name of the institution to which the transcript should be sent to:

Extension Transcript Department
Window 17, 105 Morrill Hall
University of Minnesota
Minneapolis, Minnesota 55455

WITHDRAWALS

Students who wish to cancel their registration within three months of the date of registration and prior to the submission of half the lessons in a course may do so in line with the regular refund policy explained under **Fees** in this bulletin. Students who wish to withdraw from a course after that point may do so, in effect, by simply not submitting lessons for evaluation. No grade of any kind is recorded unless all work for the course is completed.



Special Courses and Programs

The Department of Independent Study is involved in a number of special programs designed to create flexible continuing education opportunities for special groups. The following are some of the programs which, to a greater or lesser degree, use the resources of the Department of Independent Study to extend the University into the community.

Independent Study Program for Hospital and Health Care Facility Administrators

The Independent Study Program for Hospital and Health Care Facility Administrators is a three-year sequence of courses designed to improve administration of health care delivery institutions and to provide health care administrators with an educational alternative to full-time residential study. It is based on the most effective theories, principles, and practices of adult learning in the health care administration field. Administrators from states throughout the service region have found that participation in the Independent Study Program increased professional expertise in their administrative roles and, in a number of instances, afforded opportunity for job promotion and mobility. The curriculum consists of learning experiences that develop and update management skills, knowledge, and attitudes in three major areas:

Course I (PH 5775): Management and Organization Within the Hospital and Health Care Facility **15 credits**

Course II (PH 5876): Administrative and Professional Relationships Within the Hospital **15 credits**

Course III (PH 5777): External Forces Affecting Health Care Delivery **25 credits**

Opposite: Many Independent Study courses employ audio or visual aids that make learning and enhance communication between student and instructor.

Special Courses and Programs

Each course contains all or several of the following components: residential sessions at the beginning and end of the course, seminars held in locations throughout the service region, preceptor-student dialogues, and independent study. Independent study consists of monthly units of study, each covering a single topic. These topics form the basis for the meetings with the preceptor-tutors as well as for the content of the regional seminars. Developed by the University of Minnesota faculty with the assistance of the Department of Independent Study, the units include a statement of learning objectives, faculty authored material, reading assignments, and performance requirements.

The organization of Course III is substantially different from that of Courses I and II. For the first four months, participants complete an in-depth study of four major content areas: manpower, finance, organizing and social policy. The remainder of the year is spent pursuing one of these topics in depth through the execution of a research or demonstration project supported by a scholarly paper.

Courses I and II of the Independent Study Program for Hospital and Health Care Facility Administrators are open only to administrators or, in some cases, assistant administrators of health care facilities. Course III is also open to administrators with Master's degrees in Hospital and Health Care Administration, executives of health agencies and organizations, as well as persons who have successfully completed Course II. The present service region includes Illinois, Iowa, Kansas, Manitoba, Michigan, Minnesota, Missouri, Montana, Nebraska, North Dakota, Oregon, South Dakota and Wisconsin. For additional information, contact the Project Coordinator, Independent Study Program for Hospital and Health Care Facility Administrators, 186 Frontier Hall, University of Minnesota, Minneapolis, Minnesota 55455.

Independent Study Program in Patient Care Administration

The intent of the Independent Study Program in Patient Care Administration is, quite simply, to improve the practice of patient care administration and, as a result, to improve the delivery of health care. This is accomplished by providing learning experiences that develop and update management skills, knowledge and attitudes in:

The internal operations of the health care delivery system;

Relationships among people and groups of people, functioning within and related to the institutions; and

External forces which affect the function of the patient care administrator.

Special Courses and Programs

Applicants must be presently employed as administrators of patient care (Directors of Nursing or equivalent) who wish to broaden their academic preparation in administration to enable them to evaluate and meet their present or projected levels of responsibility.

COURSE I: Patient Care Management and Organization within the Hospital and Health Care Organization

Course I opens in July of each year with a two-week residential session on campus. Monthly preceptor-student dialogues are attended throughout the coming eleven months. At least one required seminar will be scheduled during the year. Course I students will complete 11 independent study lessons and conclude with a residential "wind-up" session of one week the following summer.

COURSE II: Managing Multiple Forces: Internal and External Aspects of Patient Care Administration

A one week introductory residential session initiates Course II each August. Seminars, which will focus on five core-content areas, will be scheduled during the initial phase of the course. By the conclusion of the course, students will have completed a demonstration or research project. The topic of the project will require preliminary approval by faculty, who will also provide ongoing advising to students as they pursue their projects. Students return to campus for the Course II "wind-up" session the following summer at which time they will share the process and conclusion of their projects with their peers.

The present service region includes Iowa, Kansas, Manitoba, Minnesota, Missouri, Montana, Nebraska, North Dakota, South Dakota, and Wisconsin. For additional information contact the Project Director, Independent Study Program in Patient Care Administration, 186 Frontier Hall, University of Minnesota, Minneapolis, Minnesota 55455.

Independent Study Program in Long Term Care Administration

Four independent study courses in long term care have been designed for persons who administer nursing homes, homes for the aged, and geriatric centers. Three courses combine in-residence seminars with correspondence study and are 15 weeks long; the fourth course is a 15-week practicum. Courses are designed for new entrants to the field, but may also be used as continuing education for administrators and directors of nursing who wish to obtain formal preparation in the field. Credits are transferrable to many colleges and universities throughout the United States.

Special Courses and Programs

PH 3750 (6 credits) Administration of Long Term Care Facilities relates fundamental management principles to the special problems and concerns of long term care administration.

PH 3760 (6 credits) Services for Long Term Care Patients relates the physical and psychosocial needs of patients to the services provided in the facility.

PH 3751 (6 credits) Practicum in Long Term Care Administration relates knowledge to practice in a long term care setting under the guidance of a preceptor (a licensed nursing home administrator) who has been trained to serve the student's needs.

PH 5757 (6 credits) Critical Issues in Aging; Physical, Psychosocial and Cultural Dynamics of Aging (Gerontology); and Public Policy Affecting Adaptation.

For additional information, write to the Center for Long Term Care Administration Education, 194 Frontier Hall, University of Minnesota, Minneapolis, Minnesota 55455, telephone: (612) 376-3287.

University Without Walls

The University Without Walls is a program of University College designed to serve the "educationally mature" student who has clear learning objectives, but who, for a variety of reasons, cannot realize his educational aims through existing programs. UWW is intended for students who, because of reasons of geography, time limitations, unusual interest areas, etc. are "immobilized" and therefore cannot take advantage of other programs. The Independent Study courses described in this bulletin can play an important part in a UWW student's curriculum.

Additional information and/or applications may be obtained by contacting University Without Walls, 331 Nolte Center, University of Minnesota, Minneapolis, Minnesota 55455; telephone: (612) 373-3919.

Extension Certificate Programs

Students not certain they can devote the time necessary to earn a college degree are urged to consider 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 a stepping stone to a degree program.

Continuing Education and Extension conducts 30 certificate programs organized at the collegiate level; students entering them should have adequate educational preparation or other experience that qualifies them 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. They are not, however, transferable to a degree program.

Work on a certificate may be done through Extension Independent Study, Extension Classes, day school, summer session, or any combination of these. Students may transfer credit from other accredited institutions of higher education, although a minimum of 25 percent of the 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. Core requirements must be completed by all applicants; the courses, however, need not be taken in order, except as prerequisites make it necessary.

Extension Certificate Programs

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 seven years out of date.

Advice and information about the various programs, application and completion of forms, transfer of credits, grading systems, honors, and so forth may be secured from the Extension Counseling Office, 314 Nolte Center, University of Minnesota, Minneapolis, Minnesota 55455.

Group I certificates are those that can be earned **entirely** through completion of Extension Independent Study courses. Group II certificates are those that can be partially completed through Independent Study, but in most instances, students will have to supplement these programs with credits earned in residence or transferred from accredited sources outside the University.

Extension Certificates—Group I

GENERAL STUDIES CERTIFICATE

(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 earned through General College courses.

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 General College under University Degree Programs.

LIBERAL ARTS CERTIFICATE

(45 credits)

The Liberal Arts Certificate program is offered to students who wish an introduction to a liberal arts education. It is equivalent to one full year of university-level study. With careful planning, the certificate may constitute the freshman year of a degree program in arts or business fields.

Extension Certificate Programs

Students transferring credits to this certificate program from other institutions must take a minimum of 12 credits at the University of Minnesota.

English Requirement (8 credits):

Comp 1001-1002, or equivalent.

Spread Requirement (32 credits): 8 credits in each of the following fields:

Communication, Language, Symbolic Systems: composition (other than freshman English), journalism, language, philosophy, mathematics, speech

Artistic Expression: art, architecture, classics, humanities, literature, music, theatre arts

Physical and Biological Sciences: astronomy, biology, chemistry, ecology, geology, physics

Man and Society: anthropology, economics, family studies, geography, history, political science, psychology, social science, sociology

Electives: Additional liberal arts courses to make a minimum of 45 credits total for the certificate. For a listing of Extension Independent Study courses applicable to the spread requirement, students should call or write the Department of Independent Study, 45 Wesbrook Hall, University of Minnesota, Minneapolis, Minnesota 55455, 373-3256.

POLICE ADMINISTRATION CERTIFICATE (46 credits)

The Police Administration Certificate program was planned by Continuing Education and Extension in cooperation with the School of Public Affairs, police administrators, and other municipal officials. Increasing numbers of police officers are being selected from applicants with college experience. This certificate provides an organized program of study, most of which can be transferred to a degree program.

Credits may be transferred to this program from other institutions approved by the University of Minnesota.

English Requirement (8 credits):

Comp 1001-1002 or equivalent; or Comp 1001 and 4 additional credits selected from Engl 1002, Engl 0008C, Hum 1001 or 1101, 1002, 1003 or 1103, 1004 or 1104.

Core Requirement (16 credits):

Soc 310, — Elements of Criminology

PoAd 0015C — Methods of Police Supervision

PoAd 0016C — Methods of Criminal Procedure

PoAd 0017C — Methods of Police Planning, Management, and Organization

PoAd 0018C — Methods of Criminal Investigation

Spread Requirement (22 credits):

Pol 1001 — American Government and Politics

Psy 1001 — General Psychology

Soc 1001 — Introduction to Sociology

8 additional credits selected from:

Pol 1025 — World Politics

Hist 1301, 1302 — American History

Soc 5141 — Delinquent Behavior

Extension Certificate Programs

MATHEMATICS AND SCIENCE CERTIFICATE

(45 credits)

Students transferring credits to this program from other institutions must take a minimum of 12 credits at the University of Minnesota.

Prerequisite: Two years of algebra and two years of geometry including trigonometry.
Core Requirement (23-24 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 to make 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 courses selected from this bulletin. Courses or sequences available from the Department of Independent Study are marked with a double asterisk (**).

ACCOUNTING CERTIFICATES

The Junior Accounting Certificate program is of value to junior accounting personnel, management personnel, and businessmen who need a basic understanding of the principles of accounting and corporation finance.

The requirements for the Senior Accounting Certificate are similar to those for a four-year degree in accounting. This program provides a good background for the Certified Public Accountant examinations.

Junior Accounting Certificate

(53 credits)

Students transferring credits to this certificate program from other institutions must take a minimum of 13 credits in accounting at the University of Minnesota.

Requirements:

Comp 1001-1002 — Introductory Composition**, or Comm 1001-1002 — Communication, or equivalent
Econ 1001-1002 — Principles of Macroeconomics and Microeconomics
BFin 3000 — Finance Fundamentals
Acct 1024-1025-1026 — Principles of Accounting**

Acct 3105-3106-3107 — Intermediate Accounting
Acct 3220-3221 — Cost Accounting
Math 1201 — Pre-Calculus** or 1131 — Finite Mathematics, or 1141 — Algebra, Probability, and Pre-Calculus
QA 1050 — Elementary Managerial Statistics

Senior Accounting Certificate

(94 credits)

Students transferring credits to this certificate program from other institutions must take a minimum of 24 credits in accounting at the University of Minnesota.

Requirements:

Comp 1001-1002 — Introductory Composition**, or Comm 1001-1002 — Communication, or equivalent
Comp 1027 — Intermediate Composition: Exposition**
Math 1201 — Pre-Calculus** or 1131 — Finite Mathematics, or 1141 — Algebra, Probability, and Pre-Calculus
Math 1142 — Introduction to Calculus of One and Several Variables; or 1211-1221 — Analysis I-II, or equivalent
Econ 1001-1002 — Principles of Macroeconomics and Microeconomics**
Acct 1024-1025-1026 — Principles of Accounting**
Acct 3105-3106-3107 — Intermediate Accounting
Acct 3220-3221 — Cost Accounting

Three additional accounting courses numbered 5000 or above
Fin 3000 — Finance Fundamentals
BLaw 3058 — Business Law: Contracts**
QA 1050 — Elementary Managerial Statistics

Four courses from the following:

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
BA 3002 — Business and Society
OAM 3055 — Introduction to Management Science
MIS 3099 — Elementary Fortran

Extension Certificate Programs

FIRE PROTECTION CERTIFICATE

(44 credits)

The Fire Protection Certificate program was planned by the Fire Service Information, Research and Education Center, 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.

The core courses will be available only through the Department of Independent Study. The three that are now available are FPro 0004C, 0005C, and 0007C. Additional core courses will become available at the rate of one or two each year thereafter. Equivalent courses may be transferred to this program from other institutions accredited by the University of Minnesota. It may be possible to offer group study opportunities in the future, depending on the number of students who may be interested in registering together and meeting regularly at a central location.

English Requirement (4 credits):

Spch 0001C, or Spch 1101, or Comm 1001, or Comp 1001**.

Core Requirement (26 credits):

Chem 1004 — General Principles of Chemistry (or a Natural Science)

FPro 0001C — Introduction to Fire Protection**

FPro 0002C — Hazardous Materials and Processes I**

FPro 0003C — Hazardous Materials and Processes II**

FPro 0004C — Fire Prevention**

FPro 0005C — Fire Protection and Life Safety Systems in Building Design**

FPro 0006C — Institutional and Industrial Fire Protection**

FPro 0007C — Fire Department Administration**

Spread Requirement (14 credits):

Pol 1001 — American Government and Politics**

Soc 1001 — Introduction to Sociology**
or Soc 1002 — American Community

Soc 5951 — Minority Group Relations**

Psy 1001 — General Psychology**

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 involved in community development agencies such as libraries, public and private schools, neighborhood health clinics, poverty agencies and housing authorities may find this certificate useful for personal development and professional advancement.

This certificate provides both general and career-related course work.

Extension Certificate Programs

Core requirements include 22-27 credits generic to all fields of human services, plus 3-8 credits of electives in the social sciences. The remaining 16 credits (the Concentration Requirement) must be earned through supervised work experience and/or career-related projects planned by the student and his counselor. The certificate is flexible and provides a variety of educational opportunities for paraprofessionals.

Students transferring credits to this program from other institutions 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 or writing the Extension Counseling Office, 314 Nolte Center, University of Minnesota, Minneapolis, Minnesota 55455 (612) 373-3905.

Core Requirement (22-27 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
GC 1628 — Human Services: Special Topics

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 in one of the following fields (16 credits):

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

Electives: Additional courses from the following areas to make a minimum of 46 credits total for the certificate:

GC 1285 — Cultural Anthropology, or Anth 1002 — Cultural Anthropology**
GC 1295 — Economic Perspectives: General View
GC 1722 — Parent-Child Relationships,** or FSoc 1-025 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 3301 — 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

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 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 4-year degree programs. They are designed especially 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 (46 credits)

This certificate, requiring the satisfactory completion of 46 credits of course work, represents the equivalent of 1 academic year of study. It offers a firm background 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 from other institutions to this certificate program must take a minimum of 12 credits in business administration at the University of Minneosta.

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 — Principles of Accounting**

QA 1050 — Elementary Managerial Statistics

Math 1201 — Pre-Calculus**, or Math 1131 — Finite Mathematics, or 1141 — Algebra, Probability and Pre-Calculus

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

BA 3002 — Business and Society

OAM 3055 — Introduction to Management Science

MIS 3099 — Elementary Fortran

Mgmt 3001 — Fundamentals of Management

Math 1142 or 1211-1221 — Analysis I and II**

Tran 3054 — Fundamentals of Transportation

BFin 3000 — Finance Fundamentals

Mktg 3000 — Principles of Marketing

BLaw 3058 — Business Law: Contracts**

Senior Business Administration Certificate (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 91 credit-hours represents the equivalent of 2 full years of university-level study. The course program may be considered roughly equivalent to that of the sophomore and junior years of a 4-year degree program, with particular emphasis on the basic principles and theories of business administration.

Students transferring credits to this certificate program from other institutions must take a minimum of 24 credits, including 20 credits in business administration, at the University of Minnesota.

Pre-business Requirement (39 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 — Principles of Accounting**

Math 1201 — Pre-Calculus**, or 1141 — Algebra, Probability and Pre-Calculus
 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
 OAM 3055 — Introduction to Management Science

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 — Business Economics

Electives in the College of Business Administration: At least 16 additional credits in business administration. These may be selected from the core group above or from other courses.

Other Electives: Satisfactory completion of the pre-business degree requirements in physical and biological sciences, man and society, or artistic expression, to make a minimum of 91 credits for the certificate.

Note: Students contemplating working toward a degree from the College of Business Administration should choose electives that could become part of the degree program. Such students are urged to complete the pre-business degree requirements listed in the Degree Programs section of this bulletin.

Extension Certificate Programs

CREDIT AND FINANCIAL MANAGEMENT CERTIFICATE

(62 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 is directed toward students seeking careers in trade credit management, commercial bank and finance company loan management, and senior executive positions in financial management.

Students transferring credits to this program from other institutions must take a minimum of 16 credits at the University of Minnesota.

Completion of the certificate qualifies students for the Associate and Fellow Awards of the National Institute of Credit. Persons interested in these awards should telephone or write Mr. E. Norman Eck, 330 Plymouth Building, Minneapolis, Minnesota 55402, telephone 336-8356.

Core Requirement (54 credits):

Acct 1024-1025 — Principles of Accounting**

Acct 3160 — Analysis of Financial Statements

BFin 3000 — Finance Fundamentals

BFin 0002C — Credit and Financial Management Problems

BLaw 3058, 3078, 3088 — Business Law**

Econ 1001, 1002 — Principles of Macroeconomics and Microeconomics**

Mgmt 3001 — Fundamentals of 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

BFin 3100 — Financial Management

Econ 3751 — Money and Banking**

Ins 3100 — Risk Management and Insurance**

Mgmt 3002 — Psychology in Management

Mgmt 3003 — Interpersonal Management Problems

Mktg 3080 — Industrial and Government Procurement

Tran 3054 — Fundamentals of Transportation

Comp 0003C — Review of Business English

INDUSTRIAL RELATIONS CERTIFICATE (45 credits)

The Industrial Relations Certificate is arranged and coordinated by the Department of Industrial Relations of the College of Business Administration. It is designed to provide professional training in the field of industrial relations and in the use of specialist techniques and to assist industrial relations personnel in keeping abreast of current developments in the profession. Training in this program is valuable in providing an entry into the profession, and completion of the certificate requirements may be regarded as an indication of technical competence in the field.

Students transferring credits to this program from other institutions must take a minimum of 12 credits at the University of Minnesota.

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**
 Econ 5561 — Economics of Collective Bargaining
 IR 0001C, 0002C — Supervision I**, II
 IR 3012 — Systems of Industrial Relations: Manpower Management**
 IR 3000 — Topics in Industrial Relations
 IR 0007C — Occupational Safety and Health
 IR 8017 — Union Government and Policies
 MIS 5100 — Computers and Systems Design
 Mgmt 3002 — Psychology in Management

OAM 3055 — Introduction to Management Science
 Psy 3124 — Psychology of Individual Differences
 Psy 5044 — Psychology of Motivation and Conflict
 Psy 3011 — Introduction to Psychology of Learning
 Psy 3604 — Abnormal Psychology**
 Psy 5501 — Vocational Psychology
 Soc 5201 — Social Psychology**
 Soc 5411 — Formal Organization
 IEOB 0100C — Industrial Engineering and Management
 IEOB 0210C — Motion and Time Study**
 IEOB 0408C, 0409C — Corporate Standard Data I, II

Extension Certificate Programs

INTERIOR DESIGN CERTIFICATE

(60 credits)

Note: Most of the courses for the Interior Design Certificate are now assigned to the Design Department in the College of Home Economics. The courses involved remain essentially the same in content; moving them from the Studio Art Department to the Design Department will facilitate relationships with the four-year degree program in Interior Design.

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 Institute of Interior Designers. Completion of the certificate indicates a proficiency in the field of home furnishings and decorating.

Students transferring credits to this program from other institutions must take a minimum of 16 credits at the University of Minnesota.

Core Requirement (45-48 credits):

Dsgn 1555 — Interior Design I
Dsgn 1556 — Interior Design II
Dsgn 3555 — Seminar in Interior Design
Dsgn 3556 — Seminar in Interior Design
ArtS 1119 — Drafting: Basic Drafting Techniques
ArtS 1121 — Perspective and Presentation Sketches
ArtH 1001 — Introduction to the Visual Arts**

Dsgn 1520 — Use of Color
Dsgn 1528 — Layout for Interior Design, or ArtS 0003C — Home Design and Planning
Dsgn 3577 — Contract Design Seminar
Comp 1001 — Introductory Composition**, or Comm 1001 — Communication or GC 1531 — Business Writing**
Psy 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**, French**, Humanities**, Literature**
Dsgn 5568 — Housing Problems of the Family
Dsgn 5578 — Purchasing Home Furnishings
2. Ceramics, Drawing and Painting, Sculpture, Printmaking, Photography
3. Dsgn 1529 — Layout for Interior Design
Dsgn 3578 — Contract Design Seminar
Dsgn 3512 — History of Traditional Furniture
Dsgn 3560-3561 — Interior Design Clinic
ArtS 3136 — Interior Design: Housing and the Urban Environment
ArtS 3135 — Interior Design: Housing Dynamics and Policy
4. GC 1537 — Salesmanship**
GC 1513 — Principles of Small Business Operations**
GC 1551 — Marketing: Retailing and Sales
GC 1552 — Marketing: Sales Promotion
GC 1531 — Business Writing**
Spch 0001C — Beginning Speech: Communication, or Spch 1102 — Communication in the Modern World

MANAGEMENT OF ADMINISTRATIVE SERVICES CERTIFICATES

The Management of Administrative Services Certificate programs have been developed by Continuing Education and Extension in cooperation with the College of Business Administration and the Administrative Management Society.

These college-level certificate programs are designed especially for management employees who have not received such training in schools of business or commerce; their purpose is to assist such employees in becoming more competent in their present positions and to 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. Persons interested in the latter certificates may write to: Administrative Management Society, 218 South Tenth Street, Minneapolis, Minnesota 55403, ATTN: Education Director

Associate in Management of Administrative Services Certificate (46 credits)

Students transferring credits from other institutions to this certificate program must take a minimum of 12 credits, including 8 credits in business administration, at the University of Minnesota.

Core Requirement (42-43 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 1141 — Algebra, Probability and Pre-Calculus

MIS 5100 — Computers and Systems Design
Acct 1024-1025-1026 — Principles of Accounting**
BLaw 3058 — Business Law**
Psy 1001 — General Psychology**
Psy 3801 — Introduction to Statistical Methods

Electives: Additional courses to be selected from the list of requirements or electives for the senior certificate that follows to make a total of 46 credits minimum.

Extension Certificate Programs

Fellow in Management of Administrative Services Certificate

(91 credits)

Students transferring credits to this program from other institutions must take a minimum of 24 credits, including at least 12 credits in business administration, at the University of Minnesota.

Core Requirement (44-47 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 — Principles of Accounting**

BLaw 3058 — Business Law**

Math 1201 — Pre-Calculus**, or Math 1131 — Finite Mathematics, or 1141 — Algebra, Probability and Pre-Calculus, 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 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 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 UDC certificates are intended to provide a focus for the planning of continuing education activities in particular disciplines and to provide recognition of completion of clearly identified segments of an

Extension Certificate Programs

educational program indicative of increasing levels of technical capability. Degree credit courses offered in certificate programs may be applied, with departmental approval, toward a subsequent baccalaureate degree. If the pursuit of a degree is anticipated, early contact with the academic department and application for admission to the Institute of Technology is important.

In general, the 45-credit certificate indicates familiarity with the topical area and is equivalent to the first year of college-level study. An important feature of the UDC Series is that the number of credits required (i.e., 45, 90, 135) is 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 to an employer or agency for consideration.

Students interested in a listing of the **Undergraduate Development Certificates—90 Credits, 135 Credits**, or in additional information concerning these certificates, should write to the Extension Counseling Office, 314 Nolte Center, University of Minnesota, Minneapolis, Minnesota 55455 or call 373-3905.

UDC 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 to enable them to handle certain support assignments in any engineering field. In addition, it is designed to give them background for more specialized or advanced study either as an engineer or as an engineering technician. All courses in the **UDC in Engineering and Science—45 Credits** program carry degree credit and are equivalent to the first year of required course work for an engineering degree. These credits will be applicable to a baccalaureate degree upon admission of the student to the Institute of Technology.

Students transferring credits to this program from other institutions 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**

Math 1221 — Analysis II**

Math 1231 — Analysis III**

EG 1025 — Engineering Graphics, or

CICS 1100-1101 — Introduction to For-

tran Programming I-II, or CICS 1105 —

Introduction to Algorithm Languages I

Phys 1271-1275-1281-1285 — General
Physics and Lab

Comp 1001-1002 — Introductory Compo-
sition**, or equivalent

Electives: Courses from nontechnical electives to make a minimum of 45 credits total for the certificate. 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

It is possible, through Extension Independent Study, to work on a variety of degrees from the University of Minnesota, particularly since through recent action of the University Senate, Extension Independent Study credits are now considered resident credits. However, some colleges may still limit the number of Extension Independent Study credits that can be accepted toward a degree, since the new legislation permits each college to "indicate for its students what maximum or minimum number of credits in which types of instruction shall be permitted for its degrees." It is expected that by Fall 1974 the various colleges will have established guidelines for Extension Independent Study credits.

Because it is important to follow the proper procedures while working for a degree, particularly in view of the new legislation, students should arrange for early consultation by contacting the Extension Counseling Office, 314 Nolte Center, University of Minnesota, Minneapolis, Minnesota 55455.

Note: Bulletins are essential in planning your work toward a two- or four-year degree. To obtain an official bulletin for any college, write the Service Bureau, S-1 Morrill Hall, University of Minnesota, Minneapolis, Minnesota 55455.

Opposite: Students in the Twin Cities area prefer the convenience of the Independent Study testing facilities for completing their examinations.

University Degree Programs

COLLEGE OF EDUCATION

1425 University Avenue Southeast

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 Avenue Southeast, Minneapolis, Minnesota 55414.

Teacher's Certificate

Most courses from the Department of Independent Study can be used in the acquisition and renewal of teachers' certificates. Note that the Department of Independent Study only provides the courses and **does not evaluate teaching or educational experience for a certificate or recommend courses.**

Questions concerning the regulations related to teachers' certificates should be directed to the State Department of Education or a similar agency. (In Minnesota—Director of Teacher Personnel, 4th Floor, Centennial Office Building, St. Paul, Minnesota 55101.)

GENERAL COLLEGE

106 Nicholson Hall, Minneapolis Campus

Associate in Arts Degree (A.A.)

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; (2) passing the General College Degree Comprehensive Examination.

Of the 90 credits required for the degree, 30 residence credits must be taken in General College courses. It is possible, with careful planning, to obtain the entire A.A. degree through the Department of Independent Study.

Interested students should contact the Extension Counseling Office, 314 Nolte Center, University of Minnesota, Minneapolis, Minnesota 55455; or call 373-3905.

Bachelor of Applied Studies (B.A.S.)

Bachelor of General Studies (B.G.S.)

Students admitted to Extended Programs in General College work toward certificate programs and/or 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.

A minimum of 180 credits, including the 90 credits necessary for an AA degree, is required for both the B.A.S. and B.G.S. degrees. Of the final 90 credits in both baccalaureate degree programs, 45 credits must be taken in General College courses.

Students holding A.A. degrees or nearing completion of A.A. degrees may learn more about General College Extended Programs by making an appointment with the Coordinator of Extended Programs Advising, 10 Nicholson Hall, 373-4400.

GRADUATE SCHOOL

316 Johnston Hall, Minneapolis Campus

The University of Minnesota Graduate School will not accept Extension Independent Study credits toward a Master's or Doctor's degree. Graduate students may use Independent Study credits to satisfy undergraduate admission requirements or foreign language requirements.

INSTITUTE OF TECHNOLOGY

105 Main Engineering, 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 the courses in mathematics and science required for all degrees, the Institute of Technology requires 36 credits of liberal education courses distributed as outlined in the IT bulletin. Independent Study courses may be used, to satisfy these liberal education requirements in addition to some of the technical courses.

Assistance in planning a course of study, and in securing acceptance or transfer of credits, is available from the Extension Counseling Office, 314 Nolte Center, University of Minnesota, Minneapolis, Minnesota 55455.

University Degree Programs

COLLEGE OF BUSINESS ADMINISTRATION

225 Business Administration Building, Minneapolis Campus

The pre-business requirements for the bachelor of science in business may be met almost entirely with courses 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, 314 Nolte Center, University of Minnesota, Minneapolis, Minnesota 55455.

Both the accounting and the regular business programs are outlined in the *College of Business Administration Bulletin*, available from the Service Bureau, S-1 Morrill Hall, University of Minnesota, Minneapolis, Minnesota 55455. For a list of pre-business and business courses that meet the College of Business requirements offered through the Department of Independent Study, write to that office, 45 Wesbrook Hall, University of Minnesota, Minneapolis, Minnesota 55455.

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.

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., B.S. or B.E.S. degree. It may be obtained from the Service Bureau, S-1 Morrill Hall, University of Minnesota, Minneapolis, Minnesota 55455. In addition, students should contact the Extension Counseling Office, 314 Nolte Center, University of Minnesota, Minneapolis, Minnesota 55455, for a list of Extension Independent Study courses that can be used to satisfy CLA distribution requirements.

Associate in Liberal Arts (A.L.A.)

The Associate in Liberal Arts degree indicates the successful completion of a 90-credit program devoted largely to general education. The program is equivalent to two academic years of study and is granted by the College of Liberal Arts.

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, at least 45 with grades of A, B, or C.
2. At least 45 credits earned following admission to the College of Liberal Arts.
3. Satisfaction of the CLA composition requirement.
4. Satisfaction of four of the following: (a) Foreign language study through the college third-quarter level, or exemption based on 3 or more years of high school language; (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.)

A candidate for the Bachelor of Arts degree must complete a minimum of 180 acceptable credits; the first 90 at the very least may be taken through the Department of Independent Study. Lack of departmental offerings would prove the only restriction against an external degree. Candidates for the B.A. degree must complete the 180 credits with grades of A, B, C, or S, 75 of them in 3000 and 5000 level courses. They must also satisfy the English composition, foreign language and Group Distribution requirements. Finally, B.A. candidates must complete at least 30 credits in 3000 and/or 5000 level courses from areas outside of their majors.

Bachelor of Science (B.S.)

The Bachelor of Science degree is now offered in CLA by the Departments of Communication Disorders and Economics and the Urban Studies program. Its requirements are those of the B.A. program except that the foreign language requirement is not included and the major is more extensive and concentrated. For further information call the Counseling Office, 373-3905.

Bachelor of Elected Studies (B.E.S.)

The experimental Bachelor of Elected Studies degree is open to a limited number of Extension students. This degree offers wide latitude in individual program planning toward a degree. B.E.S. candidates must meet the usual CLA quality and quantity standards, but they are exempted from English composition, foreign language, and major requirements. They design their programs to meet their particular needs and desires and may include up to 30 credits in courses not normally acceptable for a CLA degree.

Students interested in any of the College of Liberal Arts programs should contact the Extension Counseling Office, 314 Nolte Center, Minneapolis, Minnesota 55455, or call 373-3905.

University Degree Programs

UNIVERSITY COLLEGE

105 Walter Library, Minneapolis Campus

University College is designed for the student whose objectives cannot be reached through registration in any single college of the University. Each student plans a program to meet his own needs and interests and may draw on the resources of Extension Classes, Extension Independent Study, and several different colleges.

The degree earned may be Bachelor of Arts (B.A.) or Bachelor of Science (B.S.), depending on the individual program. The University College Bulletin is available from the Service Bureau, S-1 Morrill Hall, University of Minnesota, Minneapolis, Minnesota 55455.

Inter-College Program

Students are usually admitted to this program for their junior and senior years, although some third-quarter sophomores are admitted.

Admission Requirements

Students must first be admitted to another college of the University and be in residence at least one quarter. The quality of work can then be determined and students can become familiar enough with the University to plan a suitable program. Transfer to University College requires approval of the proposed curriculum plan, a 2.00 G.P.A., and upper division status.

Degree Requirements

To earn a degree, students must take at least 190 quarter credits, at least 75 of which must be upper division credits. Any program leading to a B.S. degree must satisfy the Council on Liberal Education distribution requirements. To qualify for a B.A. degree, U.C. students must meet the distribution requirements set by the College of Liberal Arts for graduation.

May We Help You Find a Course?

If there are courses you would like to take that are not listed in this bulletin, please fill in the form below. We will try to find the course at another University.

Feel free to suggest any topics of interest to you — from the purely academic to the do-it-yourself variety.

We look forward to hearing from you!

Assistant Director
Department of Independent Study
69 Wesbrook Hall
University of Minnesota
Minneapolis, MN 55455

I am interested in the following courses not offered through your department:

1. _____

2. _____

3. _____

Name _____
First Middle Last

Address _____
Street, RR#, PO# City

_____ State or Country Zip Code

COURSE DESCRIPTIONS

Courses in this bulletin are listed under departmental or subject headings, alphabetically arranged. Where several classifications are possible, cross references are given. Please refer to the index at the back of this bulletin for additional help in locating courses.

It is important to understand the course description format; it can help you choose the most appropriate course and will enable you to complete the registration form properly. A sample course description on page 58 indicates the information that may be found in all course descriptions listed in this bulletin. Additional information can be obtained by writing to the Department of Independent Study for an introduction to the study guide. The introduction provides complete information regarding course requirements, topics covered, grading procedures, textbooks, and examinations. The form used to request a study guide introduction is included in the back of this bulletin.

Sample Course Description

1	2	3	4	5	6	7	8	9
Engl 5261	MILTON	(3692)	9 lessons—\$60—	4 degree credits—	text price\$11-13—	McNaron		
	Course covers the following poems: Comus , Lycidas , Areopagitica , Paradise Lost , and Samson Agonistes . (Prerequisite: Freshman English and 5 additional credits in English or consent of instructor)							

1. Department designation and course number (See Course Numbering).
2. Course title.
3. Department of Independent Study reference number (for office use only).
4. Number of lesson assignments to be submitted for evaluation (does not include examinations).
5. Tuition cost (at \$15 credit).
6. Number and kind (i.e., degree or certificate) of credits offered.
7. Approximate price of all required texts and materials.
8. Instructor's last name (for full name and title, see faculty list).
9. Description of course content and prerequisite, if any.

Course Descriptions

ACCOUNTING

Acct 1024. PRINCIPLES OF ACCOUNTING I (1524). 16 lessons — \$45 — 3 degree credits — text price \$13-15 — 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 — \$45 — 3 degree credits — text price \$16-17 — 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 — \$45 — 3 degree credits — text price \$10-12 — 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 (1585). 14 lessons — \$60 — 4 degree credits — text price \$14-16 — Black

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, 1050, or equivalent)

Course Descriptions/ADOLESCENT PSYCHOLOGY

ADOLESCENT PSYCHOLOGY (See Child Psychology)

AEROSPACE ENGINEERING AND MECHANICS

AEM 3016. DEFORMABLE BODY MECHANICS (3237). 11 lessons — \$60 — 4 degree credits — text price \$14-16 — 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 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 one-hour 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 — \$45 — 3 degree credits — text price \$11-13 — Nodland

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

Please see the following departmental listings for course offerings:

AGRICULTURAL ECONOMICS

ANIMAL SCIENCE

ENTOMOLOGY

FOOD SCIENCE AND NUTRITION

HORTICULTURAL SCIENCE

AMERICAN INDIAN STUDIES

AmIn 1101. AMERICAN INDIAN HISTORY: A SURVEY (1501). 12 lessons — \$60 — 4 degree credits — text price \$10-12 — Voights

Indians in North America prior to white contact; Indian-white relations; development of federal Indian policy; persistence and change in American Indian cultures. **This course is now in preparation; please inquire before enrolling.**

AMERICAN STUDIES

AmSt 1101. INDIVIDUALISM IN AMERICAN LIFE (1401). 14 lessons — \$60 — 4 degree credits — text price \$20-22 — Malmshemer

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.

Course Descriptions/ANIMAL SCIENCE

AmSt 1102. RELIGION IN AMERICAN LIFE (1402). 14 lessons — \$60 — 4 degree credits — text price \$20-22 — Malmshheimer

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. **This course is now in preparation; please inquire before enrolling.**

ANIMAL SCIENCE

AnSc 1800. HORSE PRODUCTION (1041). 12 lessons — \$60 — 4 degree credits — text price \$12-14 — 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 1002. INTRODUCTION TO ANTHROPOLOGY: CULTURAL ANTHROPOLOGY (1102). 22 lessons — \$75 — 5 degree credits — text price \$33-35 — 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.

Anth 3211. INDIANS OF NORTH AMERICA (1180). 17 lessons — \$75 — 5 degree credits — text price \$12-25 — 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 1002)

Anth 5141. CULTURE AND PERSONALITY (1195). 16 lessons — \$45 — 3 degree credits — text price \$21-23 — Cohen

Role of culture in formation of personality. Problems of individual adjustments to demands of culture. Psychological approach to culture. A 5-credit revision of this course is now in preparation; you may enroll immediately in the 3-credit course described above or write for information on the new course. (Prerequisite: Anth 1002)

ART HISTORY

ArtH 1015. ART IN WESTERN CIVILIZATION (1205). 13 lessons — \$60 — 4 degree credits — text price \$13-15 — Waldfoegel

A concise history of Western art and culture. It is based on Sir Kenneth Clark's "Civilisation" films that were first shown by the British Broadcasting Corporation in the late sixties. The content of the thirteen films is provided verbatim in a text prepared by Sir Kenneth himself. Clark's text is profusely illustrated (partly in color), as is a second book that is employed in the course because of its excellence in establishing the historical settings of the works of art discussed by Clark. **This course is now in preparation; please inquire before enrolling.**

Course Descriptions/ASTRONOMY

ASTRONOMY

GC 1161. PHYSICAL SCIENCE: SOLAR ASTRONOMY (1312). 16 lessons — \$75 — 5 degree credits — text price \$15-17 — 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 — \$75 — 5 degree credits — text price \$15-17 — 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. **This course is now in preparation; please inquire before enrolling.**

BEEKEEPING

(See Entomology)

BUSINESS ADMINISTRATION

Please see the following departmental listings for course offerings:

ACCOUNTING

BUSINESS LAW

BUSINESS STUDIES (General College)

INDUSTRIAL RELATIONS

INSURANCE

MARKETING

REAL ESTATE

BUSINESS CORRESPONDENCE

(See English Composition)

BUSINESS LAW

BLaw 3058. INTRODUCTION TO LAW, AND THE LAW OF CONTRACTS AND AGENCY (1858). 12 lessons — \$60 — 4 degree credits — text price \$16-18 — 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. (Prerequisite: Econ 1002 or equivalent)

Course Descriptions/BUSINESS STUDIES

BLaw 3078. PARTNERSHIPS, CORPORATIONS, AND LAW OF REAL PROPERTY (1878). 12 lessons — \$60 — 4 degree credits — text price \$16-18 — 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 — \$60 — 4 degree credits — text price \$16-18 — 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 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)

(See also Data Processing)

GC 1511. INTRODUCTION TO MODERN BUSINESS (1616). 15 lessons — \$75 — 5 degree credits — text price \$10-12 — 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 — \$60 — 4 degree credits — text price \$13-15 — Ludlow

Designed for those who plan to purchase or begin some form of small business in a marketing-related field; i.e., non-manufacturing. 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 1537. SALESMANSHIP (1621). 10 lessons — \$45 — 3 degree credits — text price \$10-12 — 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)

Course Descriptions/CHEMICAL ENGINEERING

CHEMICAL ENGINEERING AND MATERIALS SCIENCE (MINNESOTA TECHNICAL STUDY SERIES)

ChEn 0003C. ELECTRON MICROSCOPY (3303). 7 lessons — \$75 — 5 certificate credits — text price \$17-19 — Hutchinson

Embodies the theory and techniques of electron microscopy. Physical principles are applied to interaction of electrons with materials and fields as related to the understanding of electron-micrographic and diffraction information. Elements of image formation central to the understanding of micrographic data are fully treated. Application to both biological and physical problems is considered. (Prerequisite: familiarity with quantum mechanics and mathematics through differential equations)

CHILD PSYCHOLOGY (See also Psychology)

CPsy 3301. CHILD PSYCHOLOGY (8280). 14 lessons — \$60 — 4 degree credits — text price \$9-11 — 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 (8281). 13 lessons — \$60 — 4 degree credits — text price \$13-15 — Collins

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 0302C. CONCRETE AND CONCRETE MATERIALS (2896). 16 lessons — \$45 — 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

Clas 1048. TECHNICAL TERMS OF SCIENCE, MEDICINE, AND THE HUMANITIES (5248). 16 lessons — \$45 — 3 degree credits — text price \$1 — Moke

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.

Course Descriptions/COMPOSITION

Greek

Grk 1101. BEGINNING CLASSICAL GREEK I (5901). 15 lessons — \$75 — 5 degree credits — text price \$9-11 — Kunin

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 Testament, etc.

Grk 1102. BEGINNING CLASSICAL GREEK II (5903). 15 lessons — \$75 — 5 degree credits — text price \$10-12 — Kunin

This course is a continuation of Greek 1101, an Introduction to Homeric and Classical Greek language. Included in the course are a review of materials covered in Greek 1101, completion of the Greek grammar, readings from the *Iliad* and *Odyssey*, and a transition to the Attic Greek dialect. Completion of this course should enable the student to read Homeric Greek, Classical Greek, and New Testament Greek with the aid of a dictionary. **This course is now in preparation; please inquire before enrolling.**

Latin

Lat 1101. BEGINNING LATIN I (6201). 15 lessons — \$75 — 5 degree credits — text price \$10-12 — Moke

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 — \$75 — 5 degree credits — text price \$10-12 — Moke

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 — \$75 — 5 degree credits — text price \$10-12 — Moke

A review of the elements of Lat 1101 and 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 3471. CICERO (6206). 16 lessons — \$45 — 3 degree credits — text price \$2-4 — Brauch

Readings from the most famous humanistic essays. (Prerequisite: Lat 1103 or equivalent)

COMPOSITION (See English Composition)

DATA PROCESSING

GC 1535. INTRODUCTION TO DATA PROCESSING (1965). 8 lessons — \$45 — 3 degree credits — text price \$12-14 — 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; programming in **BASIC**; systems analysis in accounts receivable, payroll, and invoicing.

Course Descriptions/DESIGN

GC 1572. INTRODUCTION TO BLOCK DIAGRAMMING AND PROGRAMMING (1972). 14 lessons — \$75 — 5 degree credits — text price \$12-14 — 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 — \$45 — 3 degree credits — text price \$12-14 — 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 1101. BEGINNING CHINESE I (5501). 20 lessons — \$75 — 5 degree credits — text price \$15-17 — 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.

Chin 1102. BEGINNING CHINESE II (5502). 17 lessons — \$75 — 5 degree credits — text price \$20-22 — Na

A continuation of Chin 1101. Basic grammatical points and paragraph structures. Introduces 329 new characters. (Prerequisite: Chin 1101)

Chin 1103. BEGINNING CHINESE III (5503). 15 lessons — \$75 — 5 degree credits — text price \$20-22 — Na

A continuation of Chin 1102. Final five lessons study simplified characters used today in mainland China. (Prerequisite: Chin 1102)

Chin 3501. ASIAN CIVILIZATION: CHINA (5520). 16 lessons — \$45 — 3 degree credits — text price \$10-12 — 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 1101. BEGINNING JAPANESE I (6101). 20 lessons — \$75 — 5 degree credits — text price \$7-9 — Matsumoto

An introduction to reading and writing modern Japanese. Provides the basic grammar and vocabulary for learning to read modern fiction, newspapers, magazine styles, and for learning conversational Japanese.

Jpn 1102. BEGINNING JAPANESE II (6102). 18 lessons — \$75 — 5 degree credits — text price \$7-9 — Matsumoto

A continuation of Japanese 1101, with greater emphasis on composition. (Prerequisite: Jpn 1101 or equivalent)

Course Descriptions/ECOLOGY

Jpn 1103. BEGINNING JAPANESE III (6103). 12 lessons — \$75 — 5 degree credits — text price \$7-9 — Matsumoto
A continuation of Japanese 1102. (Prerequisite: Jpn 1102 or equivalent)

ECOLOGY (See Forestry)

ECONOMICS

(See also Agricultural Economics)

Econ 1001. PRINCIPLES OF MACROECONOMICS (2101). 14 lessons — \$60 — 4 degree credits — text price \$17-19 — Gupta

Economic principles and their relation to the functioning of the economy. Topics covered include gross national product with its measurement, components, and weaknesses, government fiscal policy, monetary policy and the creation of money, the coordination of monetary and fiscal policy, international economics, and an introduction to wage-price controls.

Econ 1002. PRINCIPLES OF MICROECONOMICS (2102). 13 lessons — \$60 — 4 degree credits — text price \$17-19 — Puri

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.

Econ 3102. MACROECONOMIC THEORY (2166). 14 lessons — \$60 — 4 degree credits — text price \$14-16 — Tansel

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. MONEY AND BANKING (2167). 13 lessons — \$60 — 4 degree credits — text price \$15-21 — Tansel

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: Econ 3102 or equivalent)

Econ 5534. ECONOMIC SECURITY (2183). 13 lessons — \$60 — 4 degree credits — text price \$9-11 — 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. (Prerequisite: Econ 3501—Labor Economics, or Econ 3551—Labor Economics, or equivalent, or consent of instructor) **This course is now in preparation; please inquire before enrolling.**

Econ 5537. LABOR MARKET BEHAVIOR AND REGULATION (2173). 16 lessons — \$60 — 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—Labor Economics, or Econ 3551—Labor Economics, or equivalent, or consent of instructor)

Course Descriptions/EDUCATION

EDUCATION

(See also Child Psychology; Recreation and Park Administration)

Elementary Education

- EIED 3355. (Duluth) TEACHING MATHEMATICS—ELEMENTARY (2698).** 16 lessons — \$45 — 3 degree credits — text price \$19-21 — H. Johnson
Present practices and trends in methods, materials, and curriculum development; principles of learning, with emphasis on discovering techniques and meaningful approaches to operations with numbers; evaluation and diagnosis of difficulties, problem solving. (Prerequisite: 9 credits in education)

History and Philosophy of Education

- Hed 1004. INTRODUCTION TO PHILOSOPHY OF EDUCATION (2604).** 21 lessons — \$60 — 4 degree credits — text price \$3-4 — Nordberg
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.
- Hed 3090. THE SCHOOL AND SOCIETY (2690).** 9 lessons — \$45 — 3 degree credits — text price \$17-19 — Dupuis
Readings in social science and philosophy give the student an opportunity to integrate points of view in thinking about the role of the school in present-day society. (Prerequisite: 135 quarter credits or equivalent)
- Hed 5141. CRITICAL ISSUES IN CONTEMPORARY EDUCATION (2691).** 9 lessons — \$45 — 3 degree credits — text price \$12-14 — 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 theory; but the central objective will be to appreciate the crucial agreements and differences among leading thinkers in contemporary education.

Psychological Foundations of Education

- PsyF 3102. INTRODUCTION TO MEASUREMENT AND STATISTICS (2660).** 16 lessons — \$45 — 3 degree credits — text price \$12-14 — Giese
Elementary statistical methods and their application to 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. Emphasis is placed on the intelligent use of statistical methods so that the student may interpret educational data correctly. (Prerequisite: 6 credits in psychology)

ELECTRICAL TECHNOLOGY

- ET 0500C. ELEMENTS OF ELECTRIC CIRCUITS (2901).** 16 lessons — \$45 — 3 certificate credits — text price \$10-12 — Larson
Fundamental laws of direct-current circuits, the magnetic field and magnetic properties of iron and steel, induced and generated electromotive forces. Fundamental laws of alternating-current circuits, complex representation. Series and parallel circuits, polyphase circuits, power measurements in electric circuits. (Prerequisite: high school math through trigonometry)

ELECTRON MICROSCOPY

(See Chemical Engineering and Materials Science)

ELEMENTARY EDUCATION (See Education)

ENGINEERING

Please see the following departmental listings for course offerings:

AEROSPACE ENGINEERING AND MECHANICS

CHEMICAL ENGINEERING AND MATERIALS SCIENCE

CIVIL ENGINEERING

ELECTRICAL TECHNOLOGY

INDUSTRIAL ENGINEERING

ENGLISH (Composition and Literature)

Composition

Comp 0001. PREPARATORY COMPOSITION (3500). 16 lessons — \$45 — no credit — text price \$17-19 — Malmshemer

Intensive drill on grammatical forms, structure, and theme writing. Recommended for those whose primary need is organization and development of themes; any passing grade admits students to Engl 1001.

Comp 0002. GRAMMAR REVIEW (3505). 11 lessons — \$30 — no credit — text price \$5-7 — 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 0009. REMEDIAL WRITING (3506). 12 lessons — \$30 — no credit — no required text — Klohn

The fundamentals of good English, with emphasis on grammar, punctuation, and spelling and their application to written composition. Cannot be substituted for Comp 0001.

Comp 0011. THE WRITING OF POETRY (3509). 12 lessons — \$30 — no credit — text price \$27-29 — 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 — \$30 — no credit — text price \$27-29 — 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)

Course Descriptions/ENGLISH

Comp 0017. INDEPENDENT WRITING (3580). 16 lessons — \$45 — no credit — no required text — Malmshemer

Consists of manuscript criticism. There are no assignments or lesson materials. Intended for advanced students who want criticism and suggestions on their own projects. 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 — \$15 — no credit — no required text — Malmshemer

There are no assignments or lesson materials. The student submits up to 8,000 words for 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 — \$60 — 4 degree credits — text price \$10-12 — Meyer and Galle

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. (Prerequisite: a satisfactory score on the English Placement Test)

Comp 1002. INTRODUCTORY COMPOSITION (3512). 10 lessons — \$60 — 4 degree credits — text price \$15-18 — Meyer and Galle

Continuation of 1001 with emphasis on style, tone, and such larger strategies as argumentation and analysis. Subject matter for essays drawn from assigned readings of non-fictional prose. (Prerequisite: Comp 1001 or a satisfactory score on the English Placement Test).

Engl 1001. FRESHMAN ENGLISH I (3501). 14 lessons — \$60 — 4 degree credits — text price \$25-27 — Malmshemer

Concentrates on developing the student's skill in writing exposition. Literature (essays, short stories and the novella) is used chiefly as a means of providing subject matter for the writing. (Prerequisite: Comp 0001 or a satisfactory score on the English Placement Test)

Engl 1002. FRESHMAN ENGLISH II (3502). 13 lessons — \$60 — 4 degree credits — text price \$25-27 — Malmshemer

Continuation of 1001. Emphasis is on reading, analyzing and writing about poetry and drama. (Prerequisite: Engl 1001)

Engl 1003. FRESHMAN ENGLISH III (3503). 12 lessons — \$60 — 4 degree credits — text price \$29-31 — Malmshemer

Continuation of 1002. Drama, specifically tragedy, is read and analyzed. A controlled research paper on the reading material is required and is used as the final examination. (Prerequisite: Engl 1002)

Comp 1027. INTERMEDIATE COMPOSITION: EXPOSITION (3527). 12 lessons — \$60 — 4 degree credits — text price \$13-15 — 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: Freshman English or equivalent)

Comp. 1113. SHORT STORY WRITING I (3569). 16 lessons — \$60 — 4 degree credits — text price \$7-8 — Malmshemer

A basic study of short story technique, with emphasis on the student's completion of several original stories. Manuscripts will be carefully read, and suggestions for improvement will be offered. The textbook is the work of a successful author, and the stories studied illustrate a variety of writing methods. (Prerequisite: consent of instructor)

Course Descriptions/ENGLISH

Comp 1114. SHORT STORY WRITING II (3570). 16 lessons — \$60 — 4 degree credits — text price \$2-4 — Malmshaimer
Continuation of Comp 1113. The student will write four stories, in all approximately 10,000 words, and these stories will be carefully read and criticized. He will read a number of useful stories and consider such things as style, tone, pace, suggestion, and symbols. (Prerequisite: Comp 1113 or consent of instructor)

GC 1531. BUSINESS WRITING (3513). 14 lessons — \$60 — 4 degree credits — text price \$11-13 — 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 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.

Literature

GC 1374. LITERATURE OF THE THEATRE: FILM AND DRAMA (3605). 15 lessons — \$60 — 4 degree credits — text price \$10-12 — Warren
This course examines the art of film and drama in order to develop in the student an appreciation of the film and the play as art forms and as media of communication. The student will read selected plays by major playwrights and view films on television and/or in film theatres. He will study basic differences between film and drama, the elements of cinematography, and the elements of plot structure in plays; furthermore, he will receive practice in the writing of shooting scripts and film and drama reviews. The students, therefore, should have access to television, a film society, or a film theatre. **This course is now in preparation; please inquire before enrolling.**

Engl 1016. INTRODUCTION TO AMERICAN LITERATURE: SOME MAJOR FIGURES AND THEMES (3671). 14 lessons — \$60 — 4 degree credits — text price \$11-13 — 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: Freshman English or equivalent) **This course is now in preparation; please inquire before enrolling.**

Engl 1018. INTRODUCTION TO MODERN LITERATURE: PROSE FICTION (3638). 16 lessons — \$60 — 4 degree credits — text price \$15-17 — Basham
The British and American novel in the 20th century: Dreiser, Lawrence, Joyce, Huxley, Faulkner, Hemingway, Steinbeck, Cary, and Bellow. (Prerequisite: Freshman English or equivalent)

Engl 1821. INTRODUCTION TO LITERATURE I (3621). 15 lessons — \$60 — 4 degree credits — text price \$9-11 — 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. The complete sequence of three terms (1821, 1822, 1823) begins with Chaucer and ends with Arnold. Some knowledge of English history from Edward III to Victoria is required. English 1821 includes: Chaucer, Marlowe, Spenser, Shakespeare and Milton. (Prerequisite: Freshman English or equivalent)

Engl 1822. INTRODUCTION TO LITERATURE II (3622). 23 lessons — \$60 — 4 degree credits — text price \$10-12 — Grant
Continuation of Engl 1821. The Restoration and the 18th century. Pope, Swift, Addison and Steele, Johnson, Boswell, Fielding, and Sheridan. (Prerequisite: Freshman English or equivalent)

Course Descriptions/ENGLISH

Engl 1823. INTRODUCTION TO LITERATURE III (3623). 27 lessons — \$60 — 4 degree credits — text price \$9-11 — Grant

Continuation of Engl 1822. The Romantic movement and the Victorians. Wordsworth, Coleridge, Byron, Shelley, Keats, Carlyle, Tennyson, Browning, and Arnold. (Prerequisite: Freshman English or equivalent)

Engl 3241. SHAKESPEARE I (3655). 16 lessons — \$60 — 4 degree credits — text price \$13-15 — 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: Freshman English or equivalent and 5 additional credits in English or consent of instructor)

Engl 3242. SHAKESPEARE II (3656). 16 lessons — \$60 — 4 degree credits — text price \$13-15 — 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 — \$60 — 4 degree credits — text price \$14-16 — 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: completion of Freshman English requirement or equivalent and 5 additional credits in English or consent of instructor)

Engl 3412. AMERICAN LITERATURE II (3673). 16 lessons — \$60 — 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 — \$60 — 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 5221. CHAUCER (3675). 21 lessons — \$60 — 4 degree credits — text price \$9-11 — Ferris

A study of most of *The Canterbury Tales*, the last and most varied work by the founder of the English poetic tradition. Emphasizes such matters as Chaucer's skill and versatility in narrative, his ability in characterization, his place as a representative (and critic) of medieval Christianity and culture, and his relation to the great authors who preceded and followed him. Opportunity is given for additional reading and for 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: Freshman English or equivalent and 5 additional credits in either English or Humanities)

Engl 5261. MILTON (3692). 9 lessons — \$60 — 4 degree credits — text price \$11-13 — McNaron

Course covers the following poems: *Comus*, *Lycidas*, *Areopagitica*, *Paradise Lost*, and *Samson Agonistes*. (Prerequisite: Freshman English or equivalent and 5 additional credits in English or consent of instructor)

ENTOMOLOGY

Ent 0004C. PRINCIPLES OF BEEKEEPING (1004). 16 lessons — \$45 — 3 certificate credits — text price \$6-8 — 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 — \$45 — 3 degree credits — text price \$19-21 — Sprenkle

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.

GC 1722. HOME LIFE: PARENT-CHILD RELATIONSHIPS (4102). 13 tapes — \$45 — 3 degree credits — text price \$9-11 — audio tape price \$19-20 — 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 student for tasks of parenthood. The course materials are on audio tapes rather than in the traditional written format. Students are encouraged to listen to the tapes in small groups and, after listening to the tapes, to discuss their content with others in the group. See **Tapes and Tape Recorders** for information on securing a cassette recorder.

Obst 1109. SEX IN MODERN LIFE (4103). 13 tapes — \$30 — 2 degree credits — text price \$16-20 — audio tape price \$15-20 — Paxson

A basic look at sexuality from wide-ranging viewpoints of the co-instructors — in medicine and psychology — and from the several guest speakers. Anatomy and physiology of conception and reproduction are explained, including the research of Masters and Johnson on the physiology of coitus, as well as contraception, venereal disease, and related subjects. Social and personal attitudes toward sex-related matters are discussed, including historical views of sexuality inherited by our generation. Presentations include: sexual behavior in childhood and adolescence, premarital sexual standards and behavior, cross-cultural variations in sexual behavior, changing sex role patterns in the United States, varieties of sexual relationships, homosexuality, sex counseling, and sexual inadequacy.

The main goal of the course is to help students accept themselves as sexual beings and increase their comfort in dealing with sexual subject matter. The course materials are on audio tapes rather than in the traditional written format. See **Tapes and Tape Recorders** for information on securing a cassette recorder. **This course is now in preparation; please inquire before enrolling.**

FINNISH (See Scandinavian Languages)

FIRE PROTECTION

FPro 0001C. INTRODUCTION TO FIRE PROTECTION (5001). 11 lessons — \$45 — 3 certificate credits — text price \$22-25 — Richardson

A survey of the history, philosophy, and problems of fire protection and loss control;

Course Descriptions/FOOD SCIENCE AND NUTRITION

review of fire loss experience; introduction to the fire service and other public and private agencies involved in fire protection, and an assessment of their current and future effectiveness in identifying fire risks and controlling fire loss; a discussion of current developments and career opportunities in fire protection. **This course is now in preparation; please inquire before enrolling.**

FPro 0004C. FIRE PREVENTION AND CONTROL (5004). 11 lessons — \$45 — 3 certificate credits — text price \$23-27 — Buresh

In addition to the normal fire prevention methods that govern the maintenance of buildings and premises, the course develops an inter-relationship 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 development of practical solutions to fire prevention and fire control problems. **This course is now in preparation; please inquire before enrolling.**

FPro 0005C. FIRE PROTECTION AND LIFE SAFETY SYSTEMS IN BUILDING DESIGN (5005). 9 lessons — \$45 — 3 certificate credits — text price \$5-7 — 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 of students is sufficient for a good comprehension of the subject.

FPro 0007C. FIRE DEPARTMENT ADMINISTRATION (5007). 10 lessons — \$45 — 3 certificate credits — text price \$15-17 — 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. **This course is now in preparation; please inquire before enrolling.**

FOOD SCIENCE AND NUTRITION

FScN 1010. MAN'S FOOD (4301). 16 lessons — \$60 — 4 degree credits — text price \$1-3 — 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. **This course is now in preparation; please inquire before enrolling.**

FORESTRY

For 1201. CONSERVATION OF NATURAL RESOURCES (4201). 16 lessons — \$45 — 3 degree credits — text price \$6-8 — 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, grass-lands, wildlife, minerals, and energy sources.

FRENCH

Fren 0001. FRENCH FOR GRADUATE STUDENTS (5717). 16 lessons — \$45 — no credit — text price \$4-6 — O'Donnell

Fundamentals of grammar; reading of appropriate prose. Prepares for graduate reading examination in French.

Fren 1101. BEGINNING FRENCH I (5701). 27 lessons — \$75 — 5 degree credits — text price \$10-12 — Aynesworth

Essentials of the French language: grammar, reading, and composition.

Fren 1102. BEGINNING FRENCH II (5702). 27 lessons — \$75 — 5 degree credits — text price \$11-13 — Aynesworth

Continuation of French 1101: grammar, reading, and composition. (Prerequisite: French 1101 or 1 year of high school French)

GARDENING (See Horticultural Science)

GEOGRAPHY

Geog 3101. GEOGRAPHY OF THE UNITED STATES AND CANADA (4451). 18 lessons — \$60 — 4 degree credits — text price \$17-20 — 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 elements upon man and his 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 — \$60 — 4 degree credits — text price \$4-6 — Steinhauser

Provides an opportunity to study and evaluate the cultural and physical characteristics of Minnesota. The choices man has made in the use of the physical environment are observed. Agriculture and urban-industrial development are emphasized, and the interdependence of urban and rural areas is stressed.

Geog 3121. GEOGRAPHY OF SOUTH AMERICA (4450). 14 lessons — \$60 — 4 degree credits — text price \$10-12 — 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 man and his use of the land is emphasized. Problems are considered on both a national and regional basis.

GEOLOGY AND GEOPHYSICS

Geo 1001. PHYSICAL GEOLOGY (4501). 18 lessons — \$75 — 5 degree credits — text price \$10-12 — Sloan

An introduction to general geology. Survey of the main features of the physical world and the processes that have evoked them. Topics include: maps, rock formation, weathering, soils, deserts, oceans, and the phenomena of earthquakes, glaciers, and volcanoes.

Course Descriptions/GERMAN

Geo 1006. HISTORICAL GEOLOGY (4502). 16 lessons — \$45 — 3 degree credits — text price \$9-11 — 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 1111)

Geo 5151. INTRODUCTION TO PALEONTOLOGY (4551). 18 lessons — \$75 — 5 degree credits — text price (including fossil kit) \$38-40 — 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 1112, or introductory college biology)

GERMAN

Ger 0221. GERMAN FOR GRADUATE STUDENTS I (5817). 16 lessons — \$45 — no credit — text price \$16-18 — 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 — \$60 — 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 (5801). 27 lessons — \$75 — 5 degree credits — text price \$7-9 — Ramras

Grammar and easy composition. Intended to give the student a knowledge of the elements of German grammar and the facility to read and to write simple German sentences.

Ger 1102. BEGINNING GERMAN II (5802). 27 lessons — \$75 — 5 degree credits — text price \$7-9 — Ramras

Continuation of Ger 1101. (Prerequisite: Ger 1101 or 1 year of high school German)

Ger 1103. BEGINNING GERMAN III (5803). 27 lessons — \$75 — 5 degree credits — text price \$9-11 — 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 — \$75 — 5 degree credits — text price \$7-9 — Menze

Reading of 11 short stories of medium difficulty and 1 drama; composition continued. (Prerequisite: Ger 1103 or 1103, or 3 years of high school German)

Ger 3011. ELEMENTARY COMPOSITION I (5857). 11 lessons — \$30 — 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/GREEK

- Ger 3012. ELEMENTARY COMPOSITION II (5858).** 11 lessons — \$30 — 2 degree credits — text price \$8-10 — Menze
Continuation of 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 — \$30 — 2 degree credits — text price \$5-7 — Menze
Intensive practice in the use of written German and in the writing of original compositions. (Prerequisite: Ger 3012)
- Ger 3311. DRAMA: THE CLASSICAL PERIOD (5873).** 16 lessons — \$60 — 4 degree credits — text price \$11-13 — Menze
Selected plays of Lessing, Schiller, and Goethe, with assigned readings and 1 report. (Prerequisite: Ger 1301 or consent of instructor)
- Ger 3312. DRAMA: THE 19th CENTURY (5874).** 16 lessons — \$60 — 4 degree credits — text price \$10-12 — Menze
Selected plays of Kleist, Grillparzer, and Hebbel, with assigned readings and 1 report. (Prerequisite: Ger 3311 or consent of instructor)
- Ger 3313. DRAMA: THE MODERN PERIOD (5875).** 16 lessons — \$60 — 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 1 report. (Prerequisite: Ger 3312 or consent of instructor)
- Ger 3321. GERMAN PROSE OF THE 19th CENTURY (5876).** 16 lessons — \$60 — 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 — \$60 — 4 degree credits — text price \$8-10 — Menze
Selected novellen by Gerhart Hauptmann, Arthur Schnitzler, Thomas Mann, Ricarda Huch, Wilhelm Schafer, and Hermann Hesse. (Prerequisite: Ger 3321 or equivalent)
- Ger 3323. GERMAN PROSE OF THE 20th CENTURY (5878).** 16 lessons — \$60 — 4 degree credits — text price \$8-10 — Menze
Selected novellen by Franz Kafka, Robert Musil, Wolfgang Borchert, Heinrich Boll, 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 — \$60 — 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 — \$60 — 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.

Course Descriptions/HISTORY

- Hist 1003. INTRODUCTION TO MODERN EUROPEAN HISTORY III (4703).** 12 lessons — \$60 — 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 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 — \$45 — 3 degree credits — text price \$11-13 — Jones
Survey of the rise of civilization in 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. **See also Hist 1061.**
- Hist 1052. HISTORY OF ANCIENT CIVILIZATION II (4715).** 16 lessons — \$45 — 3 degree credits — text price \$17-19 — 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) **See also Hist 1062.**
- Hist 1053. HISTORY OF ANCIENT CIVILIZATION III (4716).** 16 lessons — \$45 — 3 degree credits — text price \$29-31 — 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) **See also Hist 1063.**
- Hist 1061. BASIC READINGS IN ANCIENT CIVILIZATION I (4717).** 12 lessons — \$30 — 2 degree credits — text price \$6-8 — 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; uses 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 — \$30 — 2 degree credits — text price \$11-13 — 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 — \$30 — 2 degree credits — text price \$16-18 — 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 1151. ENGLISH HISTORY I (4704).** 16 lessons — \$45 — 3 degree credits — text price \$14-16 — Garland
The evolution of English society from prehistoric times through the Wars of the Roses, with emphasis on the rise and fall of feudal kingship and the development of institutions of national government, Parliament and common law. Note: A 4-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.

Course Descriptions/HISTORY

Hist 1152. ENGLISH HISTORY II (4705). 9 lessons — \$45 — 3 degree credits — text price \$16-18 — Garland

English society in its emergence from the medieval into the modern world (1485-1760). Deals with such topics as the Renaissance, the Reformation, the Elizabethan Age, political revolution and civil war, the establishment of Empire, and the scientific revolution. Note: A 4-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.

Hist 1301. AMERICAN HISTORY I (4723). 21 lessons — \$60 — 4 degree credits — text price \$9-11 — Lupton

A survey of the political, economic and social history of the United States with emphasis on forces that resulted in the emergence of modern America. Examines the colonial and early national period through the sectional crisis.

Hist 1302. AMERICAN HISTORY II (4724). 21 lessons — \$60 — 4 degree credits — text price \$9-11 — Lupton

Continuation of 1301. Covers the growth of America from the Civil War to modern times.

Hist 3881. HISTORY OF AMERICAN FOREIGN POLICY I (4793). 9 lessons — \$45 — 3 degree credits — text price \$29-31 — Warner

Traces the early history of American foreign policy (1776-1864). Three aspects are examined: the origins and principles of American foreign policy, the fight for survival and recognition after the Revolution, and the drive for continental expansion.

Hist 3883. HISTORY OF AMERICAN FOREIGN POLICY III (4795). 9 lessons — \$45 — 3 degree credits — text price \$29-31 — Warner

A survey of the history of American foreign policy since 1909. The principle emphasis is on the causes and consequences of our entry into the two world wars and our shift from isolationism to world leadership in foreign affairs.

Hist 3893. SURVEY OF MINNESOTA HISTORY (4707). 21 lessons — \$60 — 4 degree credits — text price \$14-16 — Lindquist

The political, social, and economic development of Minnesota from the period of European explorations to the present. Access to W. W. Folwell's **History of Minnesota** and the **Minnesota History** magazine and other publications of the State Historical Society will be required. (Not open to those who have completed Hist 3891)

Hist 5051. HISTORY OF THE ANCIENT NEAR EAST I (4783). 16 lessons — \$45 — 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 — \$45 — 3 degree credits — text price \$15-20 — 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 — \$45 — 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.

Course Descriptions/HORSE PRODUCTION

Hist 5274. THE MODERN NEAR EAST: THE OTTOMAN EMPIRE AND THE SUCCESSOR STATES (4799). 16 lessons — \$60 — 4 degree credits — text price \$23-25 — Stavrou
Covers the period from the Treaty of Jassy (1792) to the Congress of Berlin (1878).

Hist 5396. (Duluth) THE FAR WEST (4792). 16 lessons — \$60 — 4 degree credits — text price \$11-13 — Lindquist

The discoveries, exploration, and settlement of the Far West, with special emphasis on the frontiers of the cattleman, miner, farmer, rancher, and the Indian problems; the course of Western economy and its relationship to the national scene. (Prerequisite: introductory course in American history)

HORSE PRODUCTION (See Animal Science)

HORTICULTURAL SCIENCE

Hort 1010. HOME LANDSCAPE GARDENING AND DESIGN (5152). 13 lessons — \$45 — 3 degree credits — text price \$14-16 — 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 3026. RESIDENTIAL LANDSCAPE DESIGN (5161). 14 lessons — \$60 — 4 degree credits — text price \$2-4 — Phillips

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. Planning home grounds for greater use and enjoyment. Uses an artistic approach to the problems and prospects of home landscaping. Students will plan a home plot with the guidance of the instructor. For nurserymen, teachers, homeowners, and others interested in home landscaping. **This course is now in preparation; please inquire before enrolling.**

HOSPITAL ADMINISTRATION

(See Special Courses and Programs)

HOW TO STUDY (See Study Skills)

HUMANITIES

Hum 1101. HUMANITIES IN THE MODERN WORLD I (5201). 16 lessons — \$45 — 3 degree credits — text price \$10-15 — Ouren

The Enlightenment and Romanticism, as 18th century responses to the Modern World (and the Scientific Revolution), are approached through the reading of major works of the age. 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 course is now in progress.

Course Descriptions/INDUSTRIAL ENGINEERING

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). 15 lessons — \$75 — 5 degree credits — text price \$10-12 — Biztray

Industrial Revolution, liberalism and socialism, individualism; Smith, Malthus, Carlyle, Marx, Ibsen, Mill, Zola, Flaubert, Tolstoy, and Dostoevski. **This course is now in preparation; please inquire before enrolling.**

Hum 1103. HUMANITIES IN THE MODERN WORLD III (5203). 16 lessons — \$45 — 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 — \$45 — 3 degree credits — text price \$13-15 — 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 — \$75 — 5 certificate credits — text price \$14-16 — 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.

IEOR 0221C. INDUSTRIAL PLANT LAYOUT (3117). 27 lessons — \$75 — 5 certificate credits — text price \$19-21 — Gunderson

Lessons on the application of industrial engineering principles in simplifying and improving the layout of manufacturing plants, shops, and warehouses, and in planning new layouts. Topics covered include types of layouts, analysis of flow, safety factors in layout work, determination of equipment and space requirements, service facilities, buildings. (Prerequisite: Math 3221 or concurrent registration, and Phys 1031)

INDUSTRIAL RELATIONS

IR 0001C. SUPERVISION I (2231). 11 lessons — \$45 — 3 certificate credits — text price \$9-11 — Pierson

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. **This course is now in preparation; please inquire before enrolling.**

Course Descriptions/INSURANCE

IR 3002. SYSTEMS OF INDUSTRIAL RELATIONS: LABOR MARKETING (2252). 12 lessons — \$60 — 4 degree credits — text price \$23-24 — Dworkin
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 — \$60 — 4 degree credits — text price \$15-17 — Krzystofiak
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 — \$60 — 4 degree credits — text price \$12-14 — 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 prevention, and insurance — and the conditions under which they should be used. How to select and deal with an insurer. Public policy issues — government regulation, social insurance, and automobile insurance problems.

Ins 3200. LIFE AND HEALTH INSURANCE (2373). 16 lessons — \$45 — 3 degree credits — text price \$8-10 — Williams

The nature and relative importance of insurable personnel risks, analysis of life and health insurance contracts, programming, estate planning, business insurance, pricing, underwriting, and marketing methods. (Prerequisite: Ins 3100 or consent of instructor)

Ins 3220. PROPERTY AND LIABILITY INSURANCE I (2393). 16 lessons — \$45 — 3 degree credits — text price \$10-12 — Williams

The nature and relative importance of property and liability risks, analysis of property and liability insurance contracts, insurance surveys; optimum property and liability insurance programs. (Prerequisite: Ins 3100)

JAPANESE (See East Asian Languages)

JOURNALISM AND MASS COMMUNICATION

Jour 1001. INTRODUCTION TO MASS COMMUNICATIONS (3701). 6 lessons — \$30 — 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 communications; aspects of advertising. (Prerequisite: Freshman Composition or equivalent)

Jour 1101. REPORTING (3714). 16 lessons — \$75 — 5 degree credits — text price \$10-12 — 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)

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 registrations can be accepted from students overseas.

Lib 1401. DESCRIPTIVE CATALOGING (7152). 16 lessons — \$45 — 3 degree credits
text price \$19-21 — Davenport

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.

Lib 1402. ELEMENTARY CLASSIFICATION AND SUBJECT HEADING (7154). 16 lessons
— \$45 — 3 degree credits — text price \$30-32 — Davenport

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)

MANAGEMENT (See Industrial Relations)

MARKETING

Mktg 3098. CONSUMER BEHAVIOR (2522). 14 lessons — \$60 — 4 degree credits — text
price \$13-15 — 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 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.

Course Descriptions/MATHEMATICS

Note: In addition to the following non-credit courses in mathematics, certain courses available through the High School program of the Department of Independent Study also fulfill entrance requirements of IT 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, Minneapolis, Minnesota 55455.

Math 0001. BASIC MATHEMATICS REVIEW I (7201). 16 lessons — \$45 — no credit — text price \$6-8 — 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 — \$45 — no credit — text price \$7-9 — Giese

Continuation of the development of algebra and an introduction to the numerical part (mensuration) 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 — \$75 — 5 degree credits — text price \$9-11 — Giese

Concepts and manipulative skills of algebra necessary for student to compete in a college algebra course. Topics studied 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.

GC 1448. MATHEMATICS: ALGEBRA AND TRIGONOMETRY (7251). 16 lessons — \$75 — 5 degree credits — text price \$10-12 — Giese

Review of intermediate algebra with emphasis on increasing the speed with which techniques can be used in applications. New material includes trigonometric functions, right triangles, radian measure. Trigonometric formulas and identities, trigonometric curves, inverse trigonometric functions, trigonometric equations. Inequalities, exponential and logarithmic functions, complex numbers. (Prerequisite: GC 1445 or equivalent) **This course is now in preparation; please inquire before enrolling.**

Math 1119. MATHEMATICS OF INVESTMENT (7220). 27 lessons — \$75 — 5 degree credits — text price \$9-10 — Kroll

Simple interest and simple discount, compound interest, annuities with simple data, extinction of debts by periodic installments; bonds, depreciation, perpetuities, capitalization, general annuity formulas. (Prerequisite: Math 1111 or Math 1201 or equivalent)

Math 1201. PRECALCULUS (7215). 27 lessons — \$75 — 5 degree credits — text price \$9-11 — Ekstrand

(May be substituted for Math 1141) 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. (Prerequisite: Math 0011 or high school higher algebra, and Math 1008 or high school trigonometry)

Math 1211. ANALYSIS I (7224). 15 lessons — \$75 — 5 degree credits — text price \$10-12 — Varadachari

Analytical geometry and calculus of functions of one variable. **This course is now in preparation; please inquire before enrolling.**

Course Descriptions/MUSIC

Math 1221. ANALYSIS II (7225). 15 lessons — \$75 — 5 degree credits — text price \$10-12 — Varadachari

A continuation of Analysis I. **This course is now in preparation; please inquire before enrolling.**

Math 1231. ANALYSIS III (7226). 15 lessons — \$75 — 5 degree credits — text price \$10-12 — Varadachari

A continuation of Analysis II. Infinite series and power series. **This course is now in preparation; please inquire before enrolling.**

Math 3211. ANALYSIS IV (7234). 16 lessons — \$75 — 5 degree credits — text price \$11-13 — 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 (7235). 20 lessons — \$75 — 5 degree credits — text price \$10-12 — 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) **This course is now in preparation; please inquire before enrolling.**

Math 3066. DIFFERENTIAL EQUATIONS (7296). 16 lessons — \$60 — 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 3221 or Math 1201)

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). (Equivalent to and replaces Mus 1041, 1042, 1043) 12 lessons (90-minute cassettes) — \$60 — 4 degree credits — text price \$18-20 — tape price \$31 — 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 tapes rather than in the traditional written format. See **Tapes and Tape Recorders** for information on securing a cassette recorder.

Mus 3541. COUNTERPOINT (7309). 16 lessons — \$45 — 3 degree credits — text price \$15-17 — Fetler

Counterpoint is the creative study of writing two or more independent melodies against each other in a strict style and is particularly valuable to the student of composition. Course is based directly on 16th-century polyphony; works of Lassus and Palestrina are examined and the rules for writing formulated accordingly. An elementary course in which the student learns the writing of good melodic lines and gradually continues with two-voice counterpoint. The writing of canon is an important part of this course. (Prerequisite: general knowledge of music theory)

Course Descriptions/NORWEGIAN

NORWEGIAN (See Scandinavian Languages)

ORIENTATION TO INDEPENDENT STUDY

(See Study Skills)

PARLIAMENTARY PROCEDURE (See Rhetoric)

PHILOSOPHY

Phil 1001. LOGIC (7602 and 7605). 10 lessons — \$45 — 3 degree credits (18 lessons — \$75 — 5 degree credits) — text price \$7-9 — Zanoni

Rules and procedures of sound argument and valid inference. Relationship of formal patterns 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 may 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 \$30 fee, and complete eight more lessons and a final examination.

Phil 1002. PROBLEMS OF PHILOSOPHY (7601). 16 lessons — \$45 — 3 degree credits — text price \$10-12 — Ahlen

Is there any principle or set of principles in terms of which we can understand man, experience, and the world? Does life have a meaning? What, if anything, can we know? What are good and evil? Is the nature of reality discoverable? Is political organization a purely natural development, or is it an artificial invention? Is there any "ideal" form of social organization? How, if at all, are religion, science, art, and politics interrelated? Attempts to answer these questions are considered. Proposed solutions by the world's great minds, ancient and modern, are examined. Students are encouraged to do critically reflective thinking concerning these basic issues. 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.

Phil 1003. ETHICS (7603). 16 lessons — \$45 — 3 degree credits — text price \$21-23 — Ahlen

A study of the principles and problems of right and wrong in human relationships. The course will include such topics as: the history of moral development, the ethical theories of classical philosophy, the problems of free will, the nature of man, the ethical problem involved in international relations and in other social problems, the relationship of religion to ethics.

Phil 1011. SCIENCE AND RELIGION (7610). 12 lessons — \$60 — 4 degree credits — text price \$4-6 — Zanoni

A historical and philosophical inquiry into the conflict between modern science and religion, attempting to find grounds to conflict and/or reconciliation.

Phil 3001. GENERAL HISTORY OF WESTERN PHILOSOPHY: GREEK PHILOSOPHY (7650). 20 lessons — \$75 — 5 degree credits — text price \$11-13 — 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 — \$75 — 5 degree credits — text price \$5-7 — Kielkopf
Philosophical thought from Descartes through Hume. The impact of science; backgrounds of contemporary philosophical problems.

Course Descriptions/PHYSICAL EDUCATION

Phil 3004. GENERAL HISTORY OF WESTERN PHILOSOPHY: KANT THROUGH NIETZSCHE (7653). 21 lessons — \$75 — 5 degree credits — text price \$8-10 — Kielkopf

Philosophical thought from Kant through Nietzsche. Contains lessons on Hegel, Marx, Mill, Comte, Schopenhauer, and Kierkegaard.

PHYSICAL EDUCATION

(See Education; Recreation and Park Administration)

PHYSICS (See also Chemical Engineering and Materials Science)

Phys 1031. INTRODUCTION TO PHYSICS: MEASUREMENT AND APPLICATIONS (7705). 15 lessons — \$75 — 5 degree credits — text price \$15-17 — Poppe

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 — \$75 — 5 degree credits — text price \$15-17 — Poppe

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)

POLICE ADMINISTRATION

PoAd 0015C. METHODS IN POLICE SUPERVISION (7815). 16 lessons — \$45 — 3 certificate credits — text price \$11-13 — Bennett

Principles of supervision and leadership. Survey of the problems of supervision with emphasis on human relations. Various types of supervisory positions. Delegation problems of the supervisor. Designed to assist those who are already supervisors in police departments and those who desire to become supervisors.

PoAd 0016C. METHODS IN CRIMINAL PROCEDURE (7816). 16 lessons — \$45 — 3 certificate credits — text price \$8-10 — Bennett

Analysis of the current code and criminal court procedure, adaptable to other state code and statutes. Emphasis is on the understanding of the elements of offenses. Arrest, search, and evidence procedures are discussed. Especially useful for those engaged in law enforcement at state, county, and local levels.

PoAd 0017C. METHODS OF POLICE PLANNING, MANAGEMENT, AND ORGANIZATION (7817). 16 lessons — \$45 — 3 certificate credits — text price \$10-12 — Bennett

Emphasis is on the major factors of the planning, management, and organization functions of police departments. Each division of the police department is examined in detail. Students of police operations will find the information especially helpful. The information is as useful for the patrolman in understanding the total department operation as it is for those in command functions in understanding their responsibilities.

Course Descriptions/POLITICAL SCIENCE

- PoAd 0018C. METHODS OF CRIMINAL INVESTIGATION (7818).** 16 lessons — \$45 — 3 certificate credits — text price \$14-16 — Bennett
Investigation of the techniques of criminal offense commission and the best methods of solving various crimes. Report writing, search procedures, interrogation procedures, court processes, identification technique, scientific aids to investigation, and investigative operational procedures are emphasized.

POLITICAL SCIENCE

- Pol 1001. AMERICAN GOVERNMENT AND POLITICS (7903).** 16 lessons — \$75 — 5 degree credits — text price \$17-19 — Scott
Analysis of principles and processes of national, state, and local government 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 — \$45 — 3 degree credits — text price \$9-11 — 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 (7926).** 16 lessons — \$45 — 3 degree credits — text price \$10-12 — Rogers
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 — \$60 — 4 degree credits — text price \$11-13 — Wynia
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.
- Pol 5443. GOVERNMENT AND POLITICS OF THE SOVIET UNION (7955).** 14 lessons — \$60 — 4 degree credits — text price \$20-22 — 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 — \$60 — 4 degree credits — text price \$8-10 — 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 — \$60 — 4 degree credits — text price \$4-6 — 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)

Course Descriptions/PSYCHOLOGY

Pol 5737. POLITICAL PARTIES (7987). 14 lessons — \$60 — 4 degree credits — text price \$11-13 — Shively

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)

PSYCHOLOGICAL FOUNDATIONS OF EDUCATION

(See Education)

PSYCHOLOGY (See also Child Psychology)

Psy 1001. GENERAL PSYCHOLOGY (8101). (Equivalent to and replaces General Psychology 1001 and General Psychology 1002) 18 lessons — \$75 — 5 degree credits — text price \$11-13 — Schletzer

Introduction to the study of human behavior with emphasis on its development. Includes motivation, emotion, learning, and the neural basis of behavior. Factors which determine individual differences in personality. Measurement of personality traits. Consideration of behavior disorders and determinants of social adjustment. Principles of social and political psychology including techniques of political persuasion and an evaluation of opinion polls. Prerequisite for all advanced courses in psychology. (Prerequisite: sophomore, 3rd quarter freshman with a B average, or consent of instructor)

Psy 1002. GENERAL PSYCHOLOGY II (8102). 9 lessons — \$45 — 3 degree credits — text price \$8-10 — Schletzer

Continuative study of human behavior. Factors which determine individual differences in personality. Measurement of personality traits. Consideration of behavior disorders and determinants of social adjustment. Prerequisite for all advanced courses in psychology at the University of Minnesota. (Prerequisite: 3 credits in Psy 1001). Note: This course is closed to students who have five credits in Psy 1001, General Psychology.

Psy 3101. INTRODUCTION TO PERSONALITY (8188). 15 lessons — \$60 — 4 degree credits — text price \$11-13 — Bradshaw

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 (8193). 14 lessons — \$60 — 4 degree credits — text price \$19-21 — Dorset

The field of abnormal psychology. Etiologies of behavioral disorders; discussion of available treatments. (Prerequisite: 5 credits introductory psychology)

REAL ESTATE

BFin 0500C. REAL ESTATE (1796). 9 lessons — \$45 — 3 certificate credits — text price \$11-13 — Ulseth

Valuation of urban real estate, problems of real estate financing, rent control, housing, land development, zoning, and other factors affecting real estate values. (Prerequisite: Econ 1002 or equivalent; open on a non-credit basis without prerequisite)

Course Descriptions/RECREATION

RECREATION AND PARK ADMINISTRATION

Rec 1520. ORIENTATION TO LEISURE AND RECREATION (8410). 16 lessons — \$75 — 5 degree credits — text price \$27-29 — Cheatham

Examination of the history and development of the park and recreation movement; sociological, economical, psychological, and political considerations of leisure and recreation in contemporary societies; professional and service organizations and their interrelationship; orientation to the professional field.

Rec 5140. RECREATION PROGRAMMING (8490). 14 lessons — \$75 — 5 degree credits — text price \$18-20 — Cheatham

Designed to provide the student with an understanding of recreation programming as it relates to a variety of program settings and activity types. Special emphasis is placed on the formal processes of organizing programs. Explores typical leadership roles and responsibilities with additional emphasis on leadership methodology and technique. Principles of program planning and leadership in all aspects of recreation.

Rec 5170. CAMP ADMINISTRATION (8487). 11 lessons — \$45 — 3 degree credits — text price \$6-8 — 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). 9 lessons — \$45 — 3 degree credits — text price \$12-14 — 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 Humanities; Philosophy)

RHETORIC (See also Study Skills)

Rhet 1226. PARLIAMENTARY PROCEDURE (7425). 6 lessons — \$15 — 1 degree credit — text price \$6-8 — Miller

Principles and practices of parliamentary procedure. 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). 27 lessons — \$75 — 5 degree credits — text price \$5-8 — Lahti

For beginners with little or no previous knowledge of Finnish. Stresses fundamentals of grammar, the facility to read and write easy Finnish.

Norwegian

Nor 1101. BEGINNING NORWEGIAN I (6301). 27 lessons — \$75 — 5 degree credits — text price \$12-15 — Gundersen

A complete survey of Norwegian grammar, plus composition and the reading of easy prose.

Nor 1102. BEGINNING NORWEGIAN II (6302). 27 lessons — \$75 — 5 degree credits — text price \$3-5 — 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) **This course is now in preparation; please inquire before enrolling.**

Swedish

Swed 1101. BEGINNING SWEDISH I (6901). 27 lessons — \$75 — 5 degree credits — text price \$6-8 — McKnight

Grammar and composition; selected readings in easy prose and verse.

SLAVIC AND EAST EUROPEAN LANGUAGES

Russian

Russ 1101. BEGINNING RUSSIAN I (6601). 27 lessons — \$75 — 5 degree credits — text price \$12-14 — 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.

Russ 1102. BEGINNING RUSSIAN II (6602). 27 lessons — \$75 — 5 degree credits — text price \$13-15 — Prokopov

Continuation of Russ 1101: reading, writing, pronunciation, and grammar. (Prerequisite: Russ 1101)

Russ 1221. SCIENTIFIC RUSSIAN I (6624). 27 lessons — \$75 — 5 degree credits — text price \$6-8 — 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 — \$30 — 2 degree credits — text price \$3-5 — 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)

Russ 1223. SCIENTIFIC RUSSIAN III (6626). 12 lessons — \$30 — 2 degree credits — no required text — Prokopov

Continuation of Russ 1222: reading and translating scientific texts. (Prerequisite: Russ 1222)

Course Descriptions/SOCIAL STUDIES

SOCIAL STUDIES (General College)

GC 1283. SOCIAL SCIENCE: PSYCHOLOGY OF HUMAN DEVELOPMENT (4104). 15 tapes — \$45 — 3 degree credits — text price \$10-12 — audio tape price \$22-24 — 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.

GC 1631. THE HELPING PROCESS IN THE SOCIAL SERVICES (8631). 12 lessons — \$45 — 3 degree credits — text price \$6-8 — Bloom

Dynamics of working effectively with people and institutions. Focuses on actual procedure of the helping process; includes development of frame of mind or attitude to help students communicate better with people and bureaucratic structures. 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 — \$60 — 4 degree credits — text price \$5-7 — 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) **This course is now in preparation; please inquire before enrolling.**

GC 1071. INTRODUCTION TO AGING (8638). 12 lessons — \$60 — 4 degree credits — text price \$16-18 — Weiss and Smith

Behavioral components, clinical aspects, and social organization of aging.

SOCIAL WORK (See also Social Studies [General College])

SW 3001. INTRODUCTION TO AMERICAN SOCIAL WELFARE AND COMMUNITY SERVICES (8690). 16 lessons — \$75 — 5 degree credits — text price \$14-16 — 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.

SOCIOLOGY

Soc 1001. INTRODUCTION TO SOCIOLOGY (8601). 14 lessons — \$60 — 4 degree credits — text price \$10-12 — Wise

A survey of the fundamental social institutions for nonprospective sociology majors. Considers the family and the church; the development and decline of social institu-

Course Descriptions/SPANISH

tions; change in the institutional functions and social disorganization. Introduces students to the fundamental concepts of sociology and provides a better understanding of the contemporary social order.

Soc 3101. ELEMENTS OF CRIMINOLOGY (8653). 16 lessons — \$60 — 4 degree credits — text price \$3-5 — Donohue

Assesses violent crime in the 1970's and crime as a symptom of individual and social maladjustment. Crime seen as a reflection of social milieu. Control, treatment, and prevention are considered.

Soc 5201. INTRODUCTION TO SOCIAL PSYCHOLOGY (8670). 16 lessons — \$60 — 4 degree credits — text price \$11-13 — Wise

Historical development of the field; analysis of important current schools of thought; reports on current research. Emphasis on the concepts of socialization and collective behavior. (Prerequisite: a recent course in introductory sociology)

Soc 5501. THE FAMILY (8681). 16 lessons — \$60 — 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 — \$60 — 4 degree credits — text price \$7-9 — Alexander

Interaction of social and cultural groups in America, with particular reference to the Negro. Processes leading to group contact; characteristics and contributions of ethnic groups in the United States; mechanisms and problems of group adjustment; democratic theory and practice; sources of prejudice, contemporary status of principal minority groups; international implications; trends and proposed solutions. (Prerequisite: Soc 1001 or consent of instructor)

SPANISH

Span 0221. SPANISH FOR GRADUATE STUDENTS (6817). 16 lessons — \$45 — no credit — text price \$7-20 — Estelle

Prepares students primarily for reading, and especially for reading general and technical nonliterary prose. Prepares for graduate reading examinations in Spanish.

Span 1101. BEGINNING SPANISH I (6801). 22 lessons — \$75 — 5 degree credits — text price \$9-11 — 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 — \$75 — 5 degree credits — text price \$9-11 — 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 — \$75 — 5 degree credits — text price \$6-8 — 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)

Course Descriptions/STATISTICS

Span 1104. INTERMEDIATE SPANISH (6825). 18 lessons — \$75 — 5 degree credits — text price \$8-10 — 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 — \$75 — 5 degree credits — text price \$8-10 — 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) **This course is now in preparation; please inquire before enrolling.**

Span 1502. CULTURES AND CIVILIZATIONS OF LATIN AMERICA: PRE-COLUMBIAN TIMES TO 1825 (6843). 12 lessons — \$60 — 4 degree credits — text price \$11-12 — Cuneo

Provides an opportunity to study and evaluate the cultures and civilizations of Latin America from prehistoric 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. **This course is now in preparation; please inquire before enrolling.**

Span 1503. CULTURES AND CIVILIZATIONS OF LATIN AMERICA: 1825 TO THE PRESENT (6844). 12 lessons — \$60 — 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 today, 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.**

Span 3007. ELEMENTARY SPANISH COMPOSITION (6854). 16 lessons — \$45 — 3 degree credits — text price \$10-12 — Cuneo

Connected prose composition. Reading and grammar. The objective is the ability to write Spanish. (Prerequisite: Span 1104 or equivalent)

Span 3008. ADVANCED SPANISH COMPOSITION (6857). 16 lessons — \$45 — 3 degree credits — text price \$8-10 — Cuneo

Continuation of Span 3007; reading, grammar, and composition of Spanish prose. (Prerequisite: Span 3007)

STATISTICS (See Education)

STUDY SKILLS

SSK 0012. GUIDED READING (3901). 12 lessons — \$30 — 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 Library.

Course Descriptions/THEATRE ARTS

Ssk 0013. SELECTING BOOKS FOR CHILDREN (3902). 12 lessons — \$30 — 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.

Ssk 0014. USING BOOKS AND LIBRARIES (3904). 11 lessons — \$30 — no credit — text price \$2-4 — Klohn

For anyone interested in books and libraries, this course increases efficiency in finding information, broadens knowledge of library resources, and suggests methods for personal enrichment through books and library materials.

PO 1001. HOW TO STUDY (3801). 6 lessons — \$30 — 2 degree credits — text price \$17-19 — 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 and effective underlining. (This course does not count as part of the 180 credit degree requirement at the University of Minnesota)

Rhet 1147. EFFICIENT READING (3947). 9 lessons — \$45 — 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 INDEPENDENT STUDY: OBSERVATION (3812). 6-10 lessons — \$45 — 3 degree credits — no required text — Hickman

Designed to help students improve their powers of observation through structured observational experiences. Includes both taped and written assignments relating to small-group, one-to-one, comparative and cross-cultural observation. May be taken on S/N basis only.

UC 1201. ORIENTATION TO INDEPENDENT STUDY: ASKING QUESTIONS (3811). 4 lessons — \$45 — 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 — \$45 — 3 degree credits — text price \$4-5 — 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. **This course is now in preparation; please inquire before enrolling.**

THEATRE ARTS

TH 0001C. INDEPENDENT PLAYWRITING (4080). 16 lessons — \$45 — 3 certificate credits — no required text — Osterberg

Specifically designed for advanced students. Student is given complete freedom. Plays in any stage of development will receive detailed criticism. Course work consists of two full-length plays or approximately the same amount of writing made up of shorter dramatic forms. (Prerequisite: consent of instructor)

Course Descriptions/WOMENS COURSES

TH 5115. PLAYWRITING (4075): 16 lessons — \$60 — 4 degree credits — no required text — Osterberg

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: typed manuscript and TH 1321, Beginning Acting: Creative Approach, or consent of instructor)

WOMEN'S COURSES

WOMEN: IS ANATOMY DESTINY? (8802): 5 lessons — \$15 — no credit — text price \$2-4 — 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 — \$30 — 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. Non-drug 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 1002. WOMEN AND POLITICS (8801): 14 lessons — \$60 — 4 degree credits — text price \$15-17 — audio tape price \$22.50 — 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 practice. Our goal is the achievement of a deeper understanding of the status of women in contemporary societies. The course materials are on audio tapes rather than in the traditional written format. See **Tapes and Tape Recorders** for information on securing a cassette recorder.

WoSt 1977. PSYCHOLOGICAL ENVIRONMENT OF WOMEN (8805): 12 lessons — \$60 — 4 degree credits — text price \$31-33 — audio tape price \$15-20 — Faunce

An examination of behavioral and social science principles and theories which have a unique application to the development, growth, and behavior of women. The course materials are on audio tapes rather than in the traditional written format. See **Tapes and Tape Recorders** for information on securing a cassette recorder. **This course is now in preparation; please inquire before enrolling.**

Opposite: Alex Kurak, Professor of Literature in the University's General College, is the instructor of four Independent Study courses.





Faculty

University of Minnesota Faculty, Current and Emeritus:

- ROBERT ALEXANDER, M.A.**
Teaching Assistant, Sociology
- JUANNE ARNAUD, Ph.D.**
Assistant Professor of Political Science
- JANINE S. AYNESWORTH, Ph.D. Cand.**
Teaching Associate, French and Italian
- CATHERINE BASHAM, M.F.A.**
Instructor of English
- JOHN V. BELL, M.S.**
Coordinator of Prospective Student Services
Office of Admissions and Records
- ROBERT L. BLACK, JR., A.B., C.P.A.**
Teaching Associate, Accounting
- THOMAS L. BRAUCH, M.A.**
Teaching Assistant, Classics
- JAMES I. BROWN, Ph.D.**
Professor of Rhetoric
- FREDERICK M. CHAPMAN, Re.D.**
Professor, Department of Leisure Education
- GLENN CHEATHAM, Ph.D.**
Assistant Professor of Leisure Education
Recreation and Park Administration
- W. ANDREW COLLINS, Ph.D.**
Assistant Professor of Child Psychology
Institute of Child Development
- SANTIAGO A. CUNEO, Ph.D.**
Associate Professor Emeritus of Spanish
- ROBERT P. DANA, M.S.**
Teaching Assistant, Philosophy
- HELEN DICKISON, M.A.**
Research Fellow, Institute of Child Development
- PAIGE DONNELLY, J.D.**
Assistant Professor of Business Studies
General College
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Teaching Assistant in Psychology
- J. B. DWORKIN, M.A.**
Lecturer in Industrial Relations
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Department of Intercollegiate Athletics
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Teaching Associate, English
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Teaching Assistant, History
- DAVID L. GIESE, Ph.D.**
Professor of Mathematical Studies
and Coordinator of Research
General College
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Instructor of Humanities
- EDWARD M. GRIFFIN, Ph.D.**
Associate Professor of English

Opposite: Caroline Weiss, Assistant Professor of Recreation and Park Administration, is the co-author and instructor of the Independent Study course on Aging.

Faculty

SHAMLALL GUPTA, M.Sc.

Research Assistant in Economics

FORREST J. HARRIS, Ph. D.

Professor and Head, Social Studies
Division
General College

SHEILA HENRY, Ph.D.

Assistant Professor of Family
Social Science

JAMES HICKMAN, M.S.W.

Instructor and Coordinator of
Human Services Certificate
Continuing Education and Extension

JAMES E. HOLTE, Ph.D.

Associate Professor of
Electrical Engineering

DENNIS R. HOWER, J.D.

Associate Professor of Business
Studies
General College

THOMAS HUTCHINSON, Ph.D.

Associate Professor of Chemical
Engineering and Material Science

HARRY C. JOHNSON, Ph.D.

Professor and Head, Department of
Elementary Education

JEFFREY JOHNSON, B.A.

Instructor, University Without Walls
University College

JENNETTE JONES, M.A.

Instructor of Anthropology

TOM B. JONES, Ph.D.

Regents' Professor of History

ROBERT M. JORDAN, Ph.D.

Professor of Animal Science

CLARA KANUN, Ph.D.

Professor and Director of Research
Continuing Education and Extension

MILES S. KERSTEN, Ph.D.

Professor of Civil Engineering and
Hydraulics

EUGENIA M. KLEMZ, B.A.

Teaching Associate, English

FRANK KRZYSTOFIAK, B.S.B.

Research Assistant, Industrial
Relations Center

MICHAEL KUNIN, M.A.

Teaching Associate, Classics

ALEX KURAK, Ph.D.

Professor of Literature
General College

SIDNEY LARSON, Ph.D.

Associate Professor of Electrical
Engineering

SANDER LATTS, Ph.D.

Associate Professor of Psychology
and Family Studies
General College

MAUDE L. LINDQUIST, Ph.D.

Professor of History

**MARK LUDLOW, M.A. and
Specialist**

Instructor of Business Studies
General College

REUEL I. LUND, Ph.D., C.P.A.

Professor Emeritus of Business
Administration

JEANNE T. LUPTON, Ph.D.

Professor and Director of Student
Services,
College of Biological Sciences

TONI McNARON, Ph.D.

Associate Professor of English

ROGER McKNIGHT, M.A.

Teaching Associate, Scandinavian

AMY TAKASE MATSUMOTO, M.A.

Assistant Professor of East Asian
Languages

EDWIN F. MENZE, Ph.D.

Professor of German

RUSSELL MEYER, M.A.

Assistant Director of Freshman
English
Teaching Associate, English

RALPH E. MILLER, M.S.

Professor and Director, Student
Personnel College of Home
Economics

JOHN MORAN, Ph.D.

Associate Professor of Aerospace
Engineering and Mechanics

TSUNG-SHUN NA, M.A.

Instructor of East Asian Languages

Faculty

- TRUMAN R. NODLAND, Ph.D.**
Professor of Agriculture and Applied
Economics
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Professor Emeritus of Music
- THOMAS D. O'DONNELL, Ph.D.**
Assistant Professor of French
- OLIVER OSTERBERG, Ph.D.**
Assistant Professor of Theatre Arts
- DALLAS OUREN, Ph.D.**
Instructor of Humanities
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Assistant Professor Emeritus of
Horticulture
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Associate Professor of Natural
Science
General College
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Associate Professor of Physics
and Astronomy
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Assistant Professor of Slavic
Languages
- ANIL PURI, M.A.**
Teaching Associate, Economics
- HERMAN RAMRAS, Ph.D.**
Professor of German
- ANTONA RICHARDSON, M.A.**
Assistant for Special Projects
Fire Service Information, Research,
and Education Center
Continuing Education and Extension
- WILLIAM C. ROGERS, Ph.D.**
Professor and Director, World
Affairs Center
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Assistant Professor of Classics
- PETER ROSKO, Ph.D.**
Associate Professor of Finance and
Insurance
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Associate Professor of Political
Science
- VERA SCHLETZER, Ph.D.**
Director, Extension Counseling
Office
- CLAIRE SELKURT, M.A.**
Librarian, Design
- W. PHILLIPS SHIVELY, Ph.D.**
Associate Professor and Director,
Graduate Study, Political Science
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Professor of Journalism and Mass
Communication
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Assistant Professor of Slavic
Languages
- EUGENE L. SKOK, Ph.D.**
Assistant Professor of Civil
Engineering and Hydraulics
- ROBERT E. SLOAN, Ph.D.**
Professor of Geology and
Geophysics
- KAREN SMITH, M.A.**
Instructor of Psychology and
Family Studies
General College
- GORDON L. STARR, M.A.**
Assistant Professor and Director of
Planning and Student Activities
Minnesota Union
- THEOFANIS G. STAVROU, Ph.D.**
Professor of History and Director of
SPAN
- FREDERIC R. STEINHAUSER, Ph.D.**
Professor of Social Studies
General College
- BEVERLY J. STEWART, M.S.W.**
Assistant Professor of Social
Studies
General College
- AYSIT TANSEL, M.A.**
Instructor in Economics
- JOHN G. TURNBULL, Ph.D.**
Professor of Economics
- RUTH VOIGHTS, M.A.**
Instructor in American Indian
Studies
- MELVIN WALDFOGEL, Ph.D.**
Professor of Art History
- ORVILLE WALKER, Ph.D.**
Associate Professor of Marketing

Faculty

DAVID M. WARK, Ph.D.

Professor of Psychology and
Counselor
Reading and Study Skills Center

DONALD M. WARREN, M.A.

Instructor of Literature
General College

CAROLINE WEISS, Ed.D.

Assistant Professor of Recreation
and Park Administration

**JAMES R. WIEBLER, Ph.D.,
A.C.S.W.**

Assistant Professor of Social Work

C. ARTHUR WILLIAMS, Ph.D.

Professor and Dean, School of
Business Administration

JEFFREY WISE, B.A.

Instructor in Sociology

CANDIDO P. ZANONI, Ph.D.

Associate Professor of Philosophy
General College

Adjunct Faculty:

A.C.M. AHLEN, Ph.D.

Retired Professor of Philosophy
Northwestern Lutheran Theological
Seminary
St. Paul, Minnesota

WAYNE W. BENNETT, LL.B.

Chief of Police
Edina, Minnesota

GEORGE BISZTRAY, Ph.D.

Assistant Professor of Germanic
Languages
The University of Chicago

VERN BLOOM, M.S.W.

Assistant Professor and Director
Conservation of Human Resources
Program
Augsburg College
Minneapolis, Minnesota

VILMAR BOSE

Fire Protection
Continuing Education and Extension
University of Minnesota

MARY JO BRADSHAW, M.A.

Psychology
Continuing Education and Extension
University of Minnesota

ROBERT J. BURESH, B.S.

Fire Protection
Assistant Fire Chief
Edina, Minnesota

HERBERT L. CARSON, Ph.D.

Professor of Humanities and
Literature
Ferris State College
Big Rapids, Michigan

F. E. CHRISTENSEN, M.A.

Associate Professor Emeritus of
Physics
St. Olaf College
Northfield, Minnesota

FAYE COHEN, Ph.D.

Anthropology
University of Puget Sound
Tacoma, Washington

JOYCE DAVENPORT, M.A.

Library Science
Continuing Education and Extension
University of Minnesota

DOROTHY DODGE, Ph.D.

Professor of Political Science
Macalester College
St. Paul, Minnesota

JOHN K. DONOHUE, M.A., M.S.W.

Sociology
Continuing Education and Extension
University of Minnesota

ADRIAN M. DUPUIS, Ph.D.

Professor of Education
Marquette University
Milwaukee, Wisconsin

SUMNER J. FERRIS, Ph.D.

Professor of English
California State College
California, Pennsylvania

BERNICE M. FOLZ, Ph.D.

Data Processing
Continuing Education and Extension
University of Minnesota

Faculty

- LEROY GOODNOUGH, M.A.**
Chairman, Department of Business
Inver Hills State Community College
Inver Grove Heights, Minnesota
- JOHN H. GUNDERSEN, B.A.**
Scandinavian Languages
Continuing Education and Extension
University of Minnesota
- ROBERT B. GUNDERSON, B.B.A.**
Staff Manufacturing Manager of
Production Control, Training
3M Company
St. Paul, Minnesota
- CHARLES F. KIELKOPF, Ph.D.**
Associate Professor of Philosophy
Ohio State University
Columbus, Ohio
- BONNIE JEAN KIMBALL, M.M.**
Director
Wayside House
Minneapolis, Minnesota
- LOUISE L. KLOHN, M.A.**
English and Study Skills
Continuing Education and Extension
University of Minnesota
- LESLIE E. KNUTSON, B.A.**
Senior Management Analyst
Hennepin County General Hospital
Minneapolis, Minnesota
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