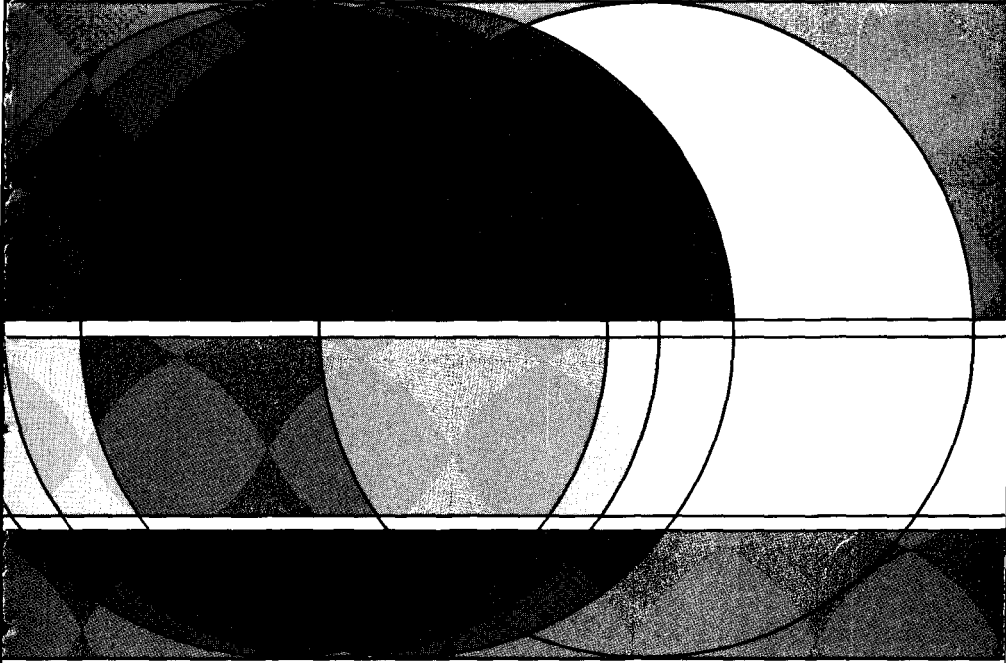


# University of Minnesota Bulletin



## Extension 76 Classes 77

Twin Cities  
July 1, 1976  
Continuing Education  
and Extension



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

**general information**  
101 Wesbrook Hall  
University of Minnesota  
Minneapolis, Minnesota 55455

**373-3195**

**counseling and program advising**  
314 Nolte Center  
University of Minnesota  
Minneapolis, Minnesota 55455

**373-3905**

**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 29)

where to call . . .

Extension phone numbers

CANCELLATIONS	373-3195
CORRESPONDENCE COURSES (INDEPENDENT STUDY)	373-3256
COUNSELING	373-3905
DEGREES AND CERTIFICATES	373-3905
DIRECTOR	373-3942
EXTENSION BULLETIN REQUEST	376-3000
EXTENSION RECORDS (MORRILL HALL)	373-2464
GENERAL INFORMATION	373-3195
HEALTH SERVICE	373-3195
INFO NEWSLETTER	376-7500
MAPS (CAMPUS OR PARKING)	376-7500
REGISTRATION	373-3195
SPECIAL CLASSES	373-5166
STUDENT BOARD	376-7500
TELEVISION CLASSES	376-4925
TRANSCRIPT REQUESTS	373-2149
(ASK FOR EXTENSION TRANSCRIPT)	
VETERANS INFORMATION	373-5777

Bookstores phone numbers

B. DALTON (ROSEDALE)	636-1341
B. DALTON (SOUTHDALE)	920-2677
COFFEY HALL (ST. PAUL)	373-0800
HEALTH SCIENCES	376-4007
LIND HALL	373-3244
NICHOLSON	373-3688
WEST BANK (SMITH)	373-4450

University phone numbers

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

Volume LXXIX, Number 8

July 1, 1976

UNIVERSITY OF MINNESOTA BULLETIN

Published by the University of Minnesota, Office of Admissions and Records, 105 Morrill Hall, Minneapolis, Minnesota 55455, monthly April, May, June, October, November, semimonthly January, March, August, trimonthly in September, and five times in July. Second-class postage paid at Minneapolis, Minnesota. Send change of address notices and other communications to Office of Admissions and Records.

The contents of this bulletin and other University bulletins, publications, or announcements are subject to change without notice.

**SENIOR CITIZENS:** Be sure to read "Persons 62 and Over." Check the Index in the back of this *Bulletin* for page number.

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(continued next page)

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

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# ways to earn credits at the university of minnesota

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

## **1. Extension Classes**

Register for an Extension class at any of several convenient locations near you! See page 302.

## **2. Correspondence Courses**

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

## **3. TV, Radio Courses**

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

## **4. Women's Programs**

Continuing Education for Women offers daytime liberal arts seminars and courses both on and off campus for credit. (Men are welcome in the classes too!) Telephone 373-9743. See page 293.

## **5. Credit by Examination**

Earn credit by examination in fields in which you have gained knowledge outside the classroom. See page 47.

## **6. CLEP Program**

You may earn credits by taking the College Level Examination Program (CLEP) examinations. See page 47.

## **7. Independent Study**

You may register for "independent study"—a Y registration—and earn credits without attending class. See page 46.

## **8. Extra Credit**

You may register for and earn extra credits—an X registration—in Extension courses if you are willing to do extra course work. See page 46.

## **9. University College**

You may earn up to 15 credits for an independent project by registering for University College 3075. See page 47.

## **10. Cooperative Programs**

Receive up to 45 "blanket" credits toward a General College degree for technical courses taken and completed at approved institutions. See page 357.

## **11. Directed Study, Research Projects**

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

# questions & answers

---

## Questions most often asked about Extension Classes:

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

1. How do I register? What hours can I register? Where do I register? (See page 11)
2. Can I earn a degree entirely through Extension? Which ones? (See page 359)
3. I have been attending college elsewhere. How can I continue my educational program through Extension? (See page 53)
4. When does registration for classes begin? End? (See page 23)
5. How do I get the credits I've earned in Extension entered on my college transcript? (See page 45)
6. What do I have to do to use my G.I. benefits to take Extension Classes? (See page 40)
7. Are there admission requirements for Extension Classes? (See page 36)
8. Are there ways to get credits without attending class? (See page 46)
9. Can I get any financial assistance to take Extension Classes? (See page 37)
10. What is the difference between certificate and degree credit? (See page 353)
11. Are classes offered at off-campus locations near my home? (See page 302)
12. What are "Informal Courses"? (See page 196)
13. Can I take classes on weekends? (See page 308)

**More questions?**

**Call Extension Classes 373-3195**

*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*

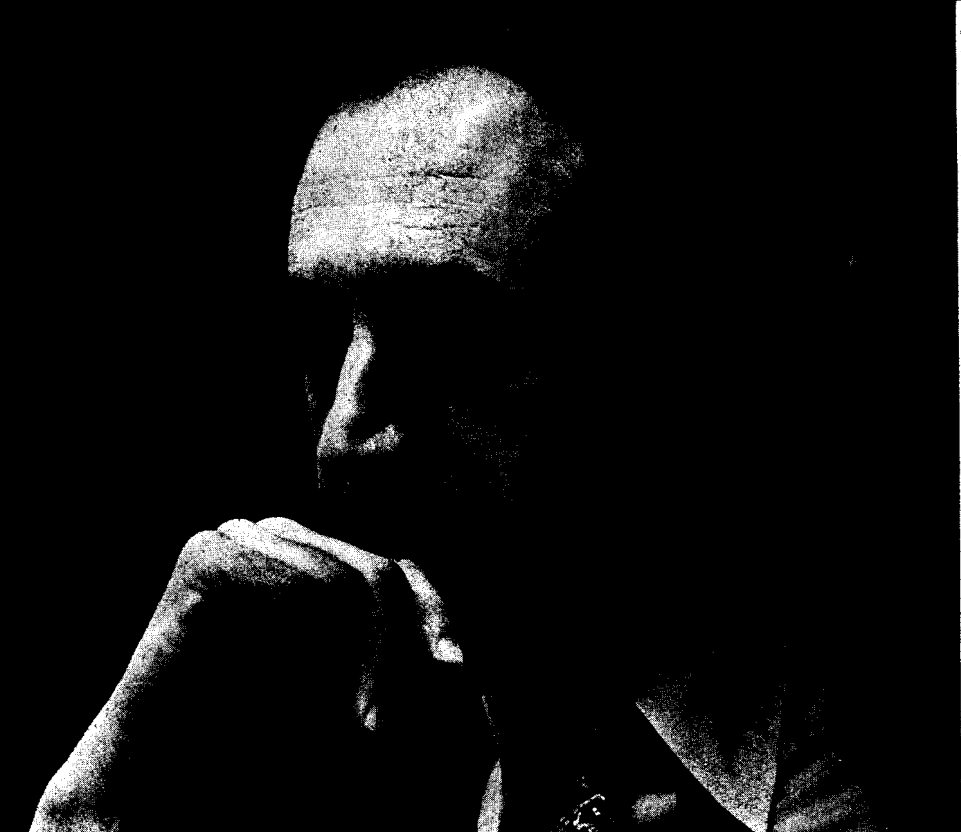


*In a society which changes as rapidly as ours, citizens of the last third of this century must consider their education not just a pre-service once-for-all preparation, but a continuing series of activities to meet specific educational objectives. The Department of Extension Classes provides opportunities 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*





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

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

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

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

**Theodore L. Campbell**  
*Director, Extension Classes*

# university of minnesota

## Board of Regents

The Honorable Neil C. Sherburne, Lakeland, Chairman; The Honorable Wenda Moore (Mrs. Cornell), Minneapolis, Vice Chairman; The Honorable Erwin L. Goldfine, Duluth; The Honorable Lauris D. Krenik, Madison Lake; The Honorable Robert Latz, Golden Valley; The Honorable L. J. Lee, Bagley; The Honorable Lester A. Malkerson, Minneapolis; The Honorable Lloyd H. Peterson, Paynesville; The Honorable George W. Rauenhorst, Olivia; The Honorable Loanne R. Thrane (Mrs. Ralph), Chanhassen; The Honorable Michael W. Unger, St. Paul; The Honorable David C. Utz, M.D., Rochester.

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Walter H. Bruning, Vice President for Administrative Operations  
Lyle A. French, Vice President for the Health Sciences  
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Frank B. Wilderson, Vice President for Student Affairs

## CONTINUING EDUCATION AND EXTENSION

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Donald Z. Woods, associate dean for Instructional Systems  
Eleanor S. Fenton, associate dean for Continuing Education  
Barbara J. Stuhler, associate dean for Community Relations and Extension Services  
Gerald A. Klement, administrative director

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John S. Malmberg, associate director	Steven J. Vite, editor
Beverly R. Sinniger, assistant director	Marie Ward, editorial assistant
Philip Lundblad, program director	Shirley Williams, office supervisor
David G. Ordos, program director	Vickie Roberts, office supervisor
Nina F. Samuels, program director	Barb Halvorson, office supervisor

### Counseling Department Staff

Vera M. Schletzer, director	Rebecca O. Johnson, counselor
Keith D. Buckley, associate director	John Kleinbaum, counselor
Udine C. Drews, program adviser	W. Winston Minor, counselor
Mari E. Forbush, program adviser	F. James Moynihan, counselor
Bonnie L. Gray, counselor	Darryl P. Sedio, counselor
Jacquelyn A. Henning, program adviser	Susan L. Thornburg, counselor
	Fran Van Slyke, tuition assistance
	Stacy Vavoulis, program adviser

### Administrative Support Services

Communication Services, Carol Flynn, coordinator	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, Director, 431 Administration  
Building, Duluth Campus  
Morris Continuing Education and Extension Center, Roger S. McCannon, 226  
Morris Services Building, Morris Campus  
Rochester Continuing Education and Extension Center, Russell A. May, 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 Education, Reynold Willie, 206 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, 338 Nolte Center for Continuing Education  
Continuing Medical Education, Douglas Fenderson, 143 Owre Hall  
Continuing Pharmacy Education, Thomas M. McKennell, 318 Harvard Street  
Continuing Education in Social Work, William Hoffman, 321 Nolte Center for  
Continuing Education

## **Community Relations and Extension Services Programs; Directors**

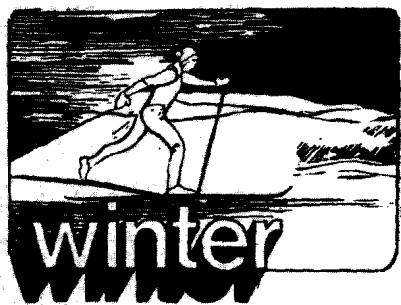
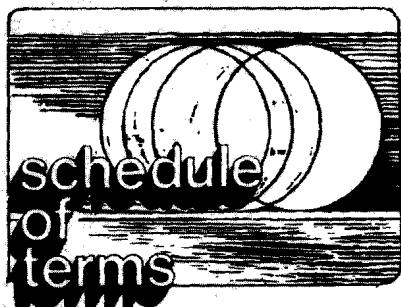
Audio Visual Library Service, Willard D. Philipson, 3300 University Ave. S.E.  
Community Programs, Carol L. Olson, 206 Wesbrook Hall  
Community Resource Development Agents  
UM Crookston, 209 Selvig Hall  
UM Duluth, 215 Main Building  
Marshall, Southwest State University  
Rochester, 2120 East Center Street, Building 4  
Continuing Education for Women, Edith Mucke, 200 Wesbrook Hall  
Continuing Education in Public Policy, William C. Rogers, 306 Wesbrook Hall  
Fire-service Information, Research, Education, Frank E. Oberg, 3300 University  
Ave. S.E.  
Minnesota Marine Advisory Service, Dale Baker, 325 Administration Building,  
Duluth campus  
Office of Delinquency Control, Richard J. Clendenen, 219 Temporary North of  
Mines  
Older Adult Program, 201 Wesbrook Hall

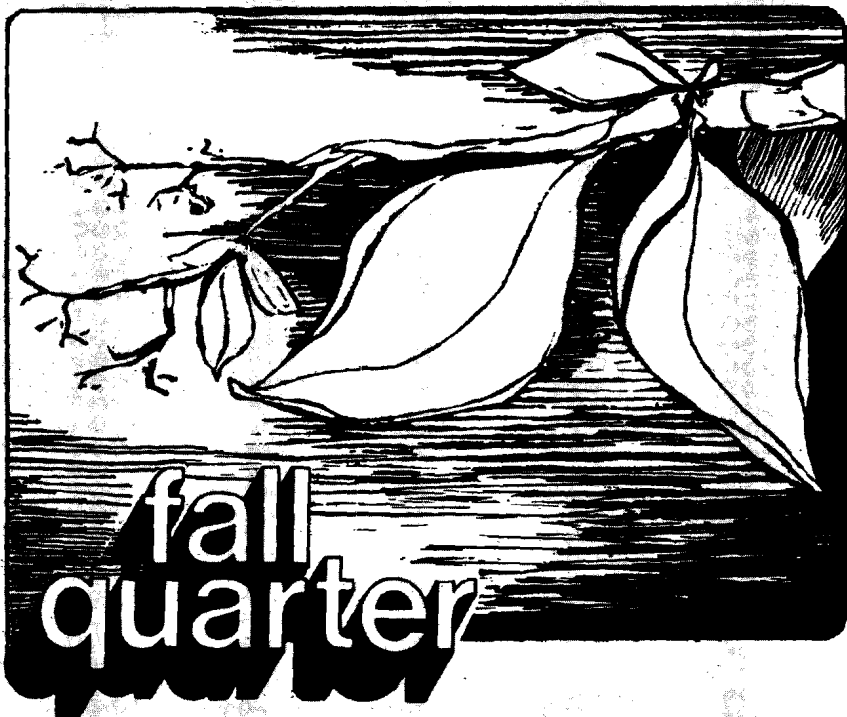
## **Human Rights**

The Board of Regents has committed itself and the University of Minnesota to the policy that there shall be no discrimination in the treatment of persons because of race, creed, color, sex, age or national origin. This is a guiding policy in the admission of students in all colleges and in their academic pursuits. It is also to be a governing principle in University-owned and University-approved housing, in food services, student unions, extracurricular activities, and all other 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.

The University of Minnesota abides by the provisions of Title IX, federal legislation forbidding discrimination on the basis of sex, and abides by all other federal and state laws regarding equal opportunity.

# when and how to register





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

### important dates

**September 27, Monday**  
Fall Quarter classes begin

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

**November 25-27**  
Thanksgiving day holidays; all offices closed and all classes dismissed

**December 9-15**  
Final examination period

**December 15, Wednesday**  
Last day of Fall Quarter



## registration dates

### mail registration

Campus Office (101 Wesbrook Hall)

**August 23-September 17**

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

### telephone requests

Campus Office (101 Wesbrook Hall)

**August 30-September 10**

Requests accepted for limited-enrollment class cards to be mailed out to students. Telephone 376-1371.

**August 30-September 17**

Information on available space in limited-enrollment classes. Telephone 376-1371.

### in-person registration

Campus Office (101 Wesbrook Hall)

**September 9, 13-17** ..... 12 noon to 8 p.m.  
**September 10** ..... 12 noon to 4:30 p.m.  
(Closed Saturday)

MacPhail Office (1128 LaSalle Ave.)

**September 9, 17** ..... 12 noon to 8 p.m.  
**September 10** ..... 12 noon to 4:30 p.m.  
**September 13-16** ..... 12 noon to 6 p.m.  
(Closed Saturday)

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

**September 9-17** ..... 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, Brooklyn Center High School, and Minnetonka School District. (see addresses, page 26).

**September 9-15** ..... 8:30 a.m. to 4 p.m.  
**September 16-17** ..... 8:30 a.m. to 8 p.m.  
(Closed Saturday)

**SEPTEMBER 17, FRIDAY:** The last day for registration and payment of tuition without a late fee.

### late registration

Campus Office (101 Wesbrook Hall)

**September 20-21** ..... 12 noon to 8 p.m.

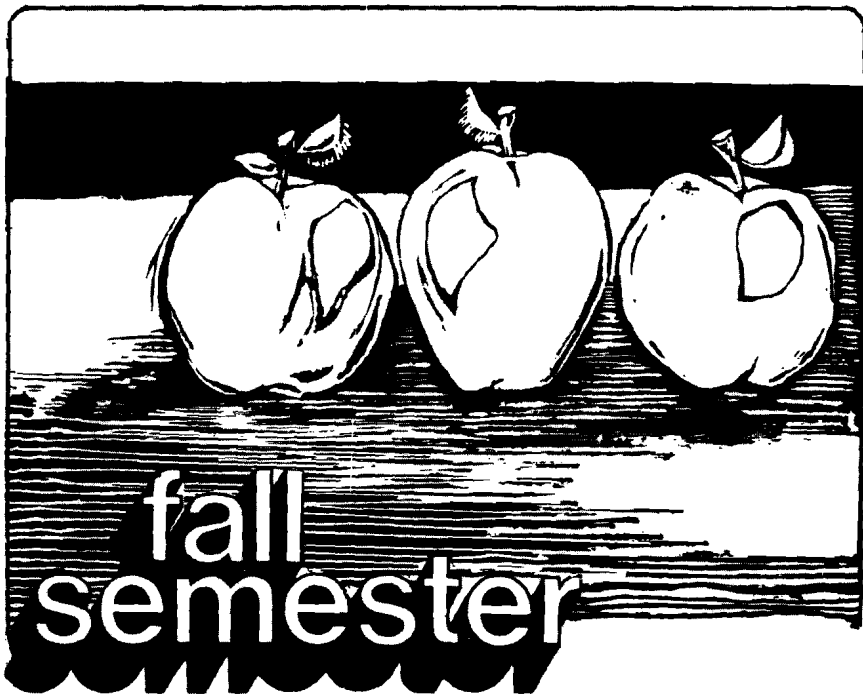
MacPhail Office (1128 LaSalle Ave.)

**September 20-21** ..... 12 noon to 8 p.m.

**September 22-24** ..... *All offices closed to process registrations*

**September 27:** Late registration resumes by mail or in person with \$5 late fee through the first week of classes (see office hours, page 29). For information regarding registration and late fees during or after the second week of classes, see page 25.

**classes meet the week of september 27 through the week of december 15**



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

**September 27, Monday**  
 Fall Semester classes begin

**November 24, Wednesday**  
 Last day for official cancellation of classes with automatic "W"

**November 25-27**  
 Thanksgiving Day holidays; all offices closed and all classes dismissed

**December 17, Friday**  
 Christmas recess begins; classes dismissed until January 5

**December 24-27**  
 Christmas holidays; all offices closed

**December 29-January 2**  
 All offices closed

**January 3, Monday**  
 Fall Semester classes resume

**January 17-22**  
 Final examination period

**January 22, Saturday**  
 Last day of Fall Semester



# fall semester

## registration dates

### mail registration

Campus Office (101 Wesbrook Hall)

August 23-September 17

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

### telephone requests

Campus Office (101 Wesbrook Hall)

August 30-September 10

Requests accepted for limited-enrollment class cards to be mailed out to students.

August 30-September 17

Telephone 376-1371.

Information on available space in limited-enrollment classes. Telephone 376-1371.

### in-person registration

Campus Office (101 Wesbrook Hall)

September 9, 13-17 ..... 12 noon to 8 p.m.

September 10 ..... 12 noon to 4:30 p.m.

(Closed Saturday)

MacPhail Office (1128 LaSalle Ave.)

September 9, 17 ..... 12 noon to 8 p.m.

September 10 ..... 12 noon to 4:30 p.m.

September 13-16 ..... 12 noon to 6 p.m.

(Closed Saturday)

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

September 9-17 ..... 9 a.m. to 5 p.m.

(Closed Saturday)

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

September 9-15 ..... 8:30 a.m. to 4 p.m.

September 16-17 ..... 8:30 a.m. to 8 p.m.

(Closed Saturday)

**SEPTEMBER 17, FRIDAY:** The last day for registration and payment of tuition without a late fee.

### late registration

Campus Office (101 Wesbrook Hall)

September 20-21 ..... 12 noon to 8 p.m.

MacPhail Office (1128 LaSalle Ave.)

September 20-21 ..... 12 noon to 6 p.m.

September 22-24 ..... *All offices closed to process registrations*

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**classes meet the week of september 27 through the week of january 22**



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

### important dates

**December 24-27**

Christmas holidays; all offices closed

**January 3, Monday**

Winter Quarter classes begin

**February 3-4**

All offices closed to process Spring Semester registrations

**February 11, Friday**

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

**February 21, Monday**

President's Day, holiday; all offices closed, no classes

**March 14-19**

Final examination period

**March 19, Saturday**

Last day of Winter Quarter

# winter quarter

## registration dates

### mail registration

Campus Office (101 Westbrook Hall)

November 15-December 28

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

### telephone requests

Campus Office (101 Westbrook Hall)

November 22-December 17

Requests accepted for limited-enrollment class cards to be mailed out to students. Telephone 376-1371.

November 22-December 28

Information on available space in limited-enrollment classes. Telephone 376-1371.

### in-person registration

Campus Office (101 Westbrook Hall)

December 1-2, 6-9

December 3, 10

8 a.m. to 8 p.m.

8 a.m. to 4:30 p.m.

(Closed Saturday)

MacPhail Office (1128 LaSalle Ave.)

December 1-2

December 3, 6-10

8:30 a.m. to 8 p.m.

8:30 a.m. to 4:30 p.m.

(Closed Saturday)

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

December 1-10

9 a.m. to 5 p.m.

(Closed Saturday)

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

December 1-7, 10

December 8-9

8 a.m. to 4 p.m.

8:30 a.m. to 8 p.m.

(Closed Saturday)

### late registration (no late fee until december 29)

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

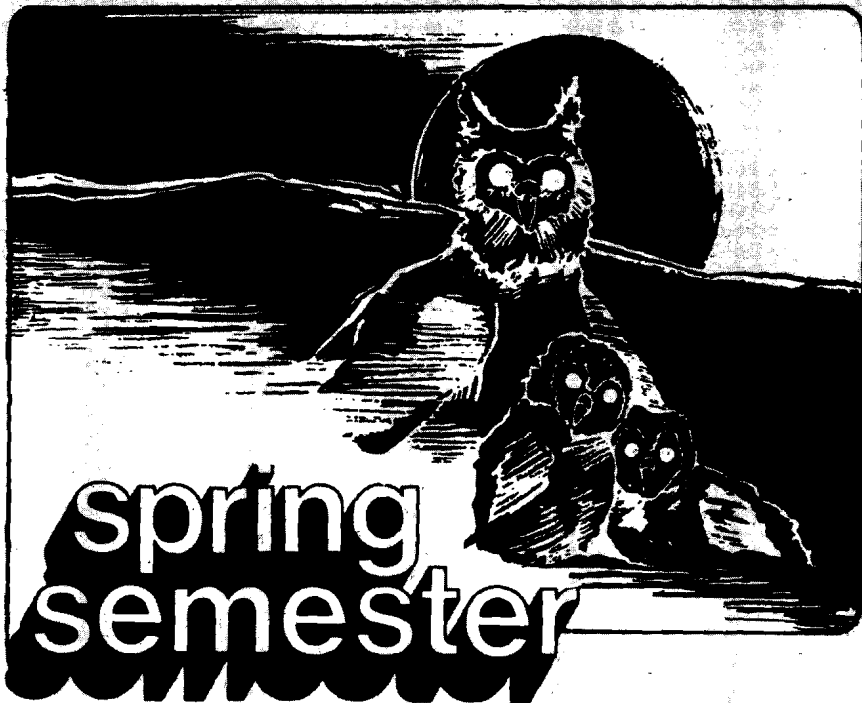
December 13-28: Late registration accepted by mail or in person with no late fee 8-4:30 p.m.

December 29-January 2: All offices closed for holidays and to process registrations. Registration accepted through December 28 with no late fee by mail only.

December 29-January 2 ..... All offices closed to process registrations

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

classes meet the week of January 3 through the week of March 19



<b>JANUARY</b> 2 3 4 5 6 7 8 1 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	<b>APRIL</b> 3 4 5 6 7 8 9 1 2 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
<b>FEBRUARY</b> 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	<b>MAY</b> 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
<b>MARCH</b> 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	<b>JUNE</b> 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

## important dates

**February 7, Monday**  
Spring Semester classes begin

**February 21, Monday**  
President's Day, holiday; all offices closed, no classes

**March 19, Saturday**  
Spring Semester recess begins; classes dismissed until March 29.

**March 24-25**  
All offices closed to process Spring Quarter registrations

**March 28, Monday**  
Spring Semester classes resume

**April 8, Friday**  
Last day for official cancellation of classes with automatic "W"

**May 30, Monday**  
Memorial Day, holiday; all offices closed

**June 6-11**  
Final examination period

**June 11, Saturday**  
Last day of Spring Semester

# spring semester

## registration dates

### mail registration

Campus Office (101 Wesbrook Hall)

#### January 10-February 2

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

### telephone requests

Campus Office (101 Wesbrook Hall)

#### January 17-January 26

Requests accepted for limited-enrollment class cards to be mailed out to students. Telephone 376-1371.

#### January 17-February 2

Information on available space in limited-enrollment classes. Telephone 376-1371.

### in-person registration

Campus Office (101 Wesbrook Hall)

January 24-27 ..... 12 noon to 8 p.m.

January 28 ..... 12 noon to 4:30 p.m.

January 31-February 2 ..... 12 noon to 8 p.m.  
(Closed Saturday)

MacPhail Office (1128 LaSalle Ave.)

January 24-27 ..... 12 noon to 6 p.m.

January 28 ..... 12 noon to 4:30 p.m.

January 31-February 1 ..... 12 noon to 6 p.m.

February 2 ..... 12 noon to 8 p.m.  
(Closed Saturday)

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

January 24-February 2 ..... 9 a.m. to 5 p.m.  
(Closed Saturday)

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

January 24-February 2 ..... 8:30 a.m. to 4 p.m.

**FEBRUARY 2, WEDNESDAY:** The last day for registration and payment of tuition without a late fee.

February 3-4 ..... *All offices closed to process registrations*

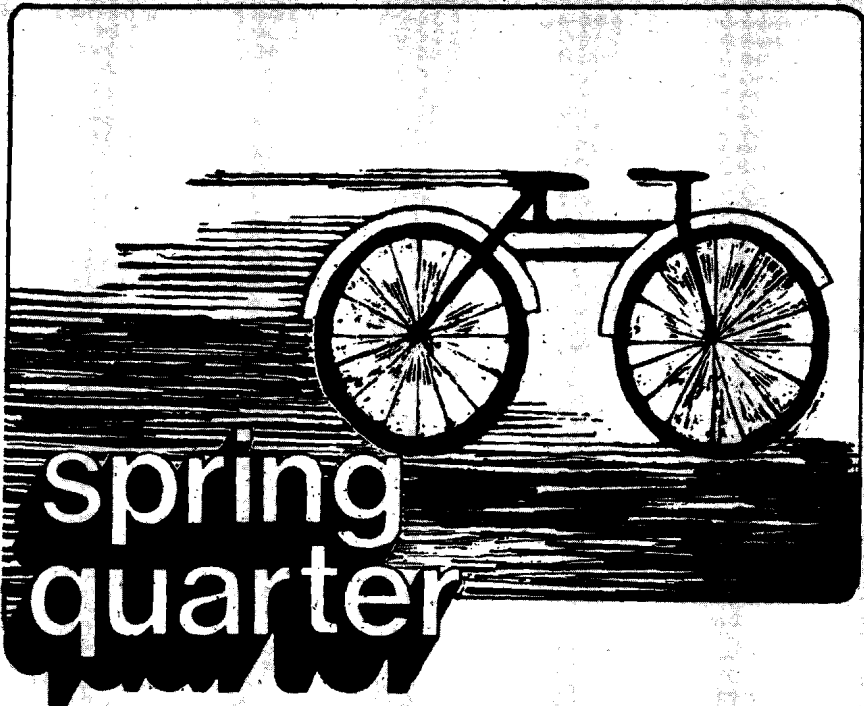
### late registration

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

**February 3-4:** Late registration accepted with \$5 late fee by mail only. (All offices closed to process registration.)

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

**classes meet the week of february 7 through the week of june 11**



<p><b>FEBRUARY</b></p> <p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28</p>	<p><b>MAY</b></p> <p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31</p>
<p><b>MARCH</b></p> <p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31</p>	<p><b>JUNE</b></p> <p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30</p>
<p><b>APRIL</b></p> <p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30</p>	

### important dates

**March 28, Monday**  
Spring Quarter classes begin

**May 6, Friday**  
Last day for official cancellation of classes with automatic "W"

**May 30, Monday**  
Memorial Day, holiday; all offices closed

**June 6-11**  
Final examination period

**June 11, Saturday**  
Last day of Spring Quarter

**The summer *Bulletin* will be available during March, 1977.**

# spring quarter

## registration dates

### mail registration

Campus Office (101 Wesbrook Hall)

**February 21-March 23**

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

### telephone requests

Campus Office (101 Wesbrook Hall)

**February 28-March 16**

Requests accepted for limited-enrollment class cards to be mailed out to students. Telephone 376-1371.

**February 28-March 23**

Information on available space in limited-enrollment classes. Telephone 376-1371.

### in-person registration

Campus Office (101 Wesbrook Hall)

**March 14-17, 21-23** ..... 8 a.m. to 8 p.m.  
**March 18** ..... 8 a.m. to 4:30 p.m.  
(Closed Saturday)

MacPhail Office (1128 LaSalle Ave.)

**March 14, 23** ..... 8:30 a.m. to 8 p.m.  
**March 15-17, 21-22** ..... 8:30 a.m. to 6 p.m.  
**March 18** ..... 8:30 a.m. to 4:30 p.m.  
(Closed Saturday)

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

**March 14-23** ..... 9 a.m. to 5 p.m.  
(Closed Saturday)

Registration accepted at the following locations only for classes taught there: Richfield District Office, Carl Sandburg Junior High School, Roseville District Office, Brooklyn Center High School and Minnetonka School District (see addresses, page 28).

**March 14-18, 21** ..... 8:30 a.m. to 4 p.m.  
**March 22-23** ..... 8:30 a.m. to 8 p.m.  
(Closed Saturday)

**MARCH 23, WEDNESDAY:** The last day for registration and payment of tuition without a late fee.

**March 24-25** ..... *All offices closed to process registrations*

### late registration

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

**March 24-25:** Late registration accepted with \$5 late fee by mail only. (All offices closed to process registration.)

**March 28:** Late registration resumes by mail or in person with \$5 late fee through first week of classes (see office hours, page 29). For information regarding registration and late fees during or after the second week of classes, see page 25.

**classes meet the week of march 28 through the week of  
june 11**

# register by mail, by telephone, or in person

## These are all NEW registration procedures.

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

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

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

1. Obtain official registration forms at the Minneapolis campus office, 101 Wesbrook Hall, or at the MacPhail office, 1128 LaSalle, downtown Minneapolis, at any time during office hours; or call 373-3195. Be sure to ask for health service, athletic facility or G.I. forms, if needed.

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

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

UNM Continuing Education and Extension UNIVERSITY OF MINNESOTA		Department of Extension Classes REGISTRATION FORM				OFFICE USE ONLY	
DEPARTMENT Arts		COURSE NO 5710		COURSE TITLE AS APPEARS IN BULLETIN Photography		NON TRANSCRIPT REGISTRATION PRICE OVER \$0 UNDER \$5 OTHER <input type="checkbox"/>	
SECTION 2	CREDIT 4	DAY Th	HOUR 6-9:45	LOCATION ArtB	ROOM 131	<small>Graduate Credit: Restricted One Session</small> <small>If you have been admitted to Graduate School at the University of Minnesota and are now registering for the first time since admission.</small> <input checked="" type="checkbox"/>	
TUITION \$62.00		SPECIAL FEES		COURSE FEE \$15	LATE FEE	COURSE TOTAL \$77	
OFFICE USE ONLY						ENROLLMENT PERIOD IS <u>76</u>	
NAME LAST Joyner		FIRST Marie		MIDDLE Alice		BIRTH DATE (USE NUMERICS) MONTH / DAY / YEAR 6 / 28 / 53	
LOCAL STREET ADDRESS (INCLUDE APT NO IF APPROPRIATE) 367 East 44th Street				SOCIAL SECURITY NO 303-04-0101			
CITY Minneapolis		STATE ABBREV MN	ZIP CODE 55419	HOME PHONE 829-9417		SEX <input checked="" type="checkbox"/> M <input checked="" type="checkbox"/> F	
OCCUPATION Social Worker				BUSINESS PHONE 892-0994		EXT 32	
PREVIOUS U of M ATTENDANCE <input type="checkbox"/> NONE		CONTINUING EDUCATION and EXTENSION 1975		DAY SCHOOL COLLEGE & YEAR CLA 1973		START DATE MONTH / DAY / YEAR	
						END DATE MONTH / DAY / YEAR	



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

<b>nonlimited</b>	Fall Qtr & Sem	Winter Qtr	Spring Sem	Spring Qtr
mail registration begins	Aug. 23	Nov. 15	Jan. 10	Feb. 21
in-person requests begin	Sept. 9	Dec. 1	Jan. 24	Mar. 14

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

<b>limited</b>	Fall Qtr & Sem	Winter Qtr	Spring Sem	Spring Qtr
mail registration begins	Aug. 23	Nov. 15	Jan. 10	Feb. 21
telephone requests begin	Aug. 30	Nov. 22	Jan. 17	Feb. 28
in-person registration begins	Sept. 9	Dec. 1	Jan. 24	Mar. 14

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

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

Students may register or obtain space in limited-enrollment classes in three ways:

**I. By mail starting in advance of in-person registration.**

- A. Follow the steps outlined above in "general registration instructions."
- B. Make out a SEPARATE CHECK FOR EACH LIMITED CLASS. If one check is used for two or more classes and one class is closed, the registration for all classes will not be honored and will be mailed back to the student. *Nonlimited-enrollment* class registrations may be paid for by writing only one check.
- C. Mail registration forms with a SEPARATE CHECK FOR EACH LIMITED CLASS (Made payable to the University of Minnesota) to:  
 Department of Extension Classes  
 101 Westbrook Hall  
 University of Minnesota  
 Minneapolis, Minnesota 55455

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

If the class is closed when your registration is received, we will notify you by return mail.

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

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

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

ii. **By telephone starting in advance of in-person registration:**

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

Fall Quarter and Semester: Aug. 30

Winter Quarter: Nov. 22

Spring Semester: Jan. 17

Spring Quarter: Feb. 28

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

Fall Quarter and Semester: Sept. 17

Winter Quarter: Dec. 17

Spring Semester: Jan. 26

Spring Quarter: Mar. 16

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

Fall Quarter and Semester: Sept. 17

Winter Quarter: Dec. 28

Spring Semester: Feb. 2

Spring Quarter: Mar. 23

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

1. Follow the steps outlined above in "general registration instructions."
2. Then register by mail (instructions I above) or in person (instructions III below).

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

Fall Quarter and Semester: Sept. 9-17

Winter Quarter: Dec. 1-10

Spring Semester: Jan. 24-Feb. 2

Spring Quarter: Mar. 14-23

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

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

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

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

## closed classes

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

If 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 the term). Starting the second week of the term late registrations will be assessed the appropriate late fee.

## late registration and additions

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

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

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

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

**Quarter and Semester Classes**—No registration will be accepted unless the student has attended the first class meeting or registers in time so that he 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.

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

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

Those students registering late for Informal Courses (see page 196) must pay a \$5 late fee. No registrations for Informal Courses will be accepted after the end of the second week of classes.

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

## how to register for courses at neighborhood centers

For registration information about classes being held off campus at neighborhood locations, see the section beginning on page 421.

**The offices below are open for registration during registration hours only. See Registration Hours, pages 13-21.**

### **downtown st. paul**

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

### **richfield district office**

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

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

### **carl sandburg junior high school office**

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

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

### **minnetonka school district**

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

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

### **roseville district office**

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

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

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

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

### **brooklyn center high school**

Registrations will be taken at Brooklyn Center High School, Community Education Office, for those classes being taught at that location.

Brooklyn Center Community Education Office, 6500 Humboldt Avenue North 55430.

## **out-state offices**

### **duluth office**

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

### **morris office**

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

### **rochester office**

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

# Wesbrook Hall

Continuing Education  
And Extension

# office hours

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**The following are normal daily office hours.  
Extended hours during registration periods  
are given pages 13-21.**

## **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.  
Saturday ..... CLOSED

### **summer 1976**

June 11-July 15: Monday through Thursday, 8 a.m.-6:30 p.m.  
Friday, 8 a.m.-4:30 p.m.  
July 19-Sept. 8: Weekdays, 8 a.m.-4:30 p.m.

## **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.  
Students may register for Extension Classes Monday through Friday at MacPhail.  
No registrations are taken on Saturdays, however.  
Saturday ..... 8:30 a.m.-2 p.m.  
Saturday (July, August) ..... CLOSED

## **counseling department**

(minneapolis campus)

314 Nolte Center (373-3905)

### **office hours**

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

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# bookstores

The evening schedule listed on the next page has been established by University bookstores. **Note that bookstores are not open every night. Some bookstores have special hours during registration periods. Telephone 376-7500 the week before classes begin for information.**

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

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

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

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

See maps in the back of this **Bulletin** for locations of campus bookstore buildings. A new East Bank bookstore is now under construction, across Pillsbury Drive from Nicholson Hall, and will open during the 1976-77 academic year. Watch for details in **Info**.

### **nicholson bookstore**

The Nicholson Hall Bookstore sells books for courses in the College of Liberal Arts (except for those CLA departments listed below in the Harold Smith west bank bookstore), Education, and General College.

Telephone: 373-3688

#### **special hours:**

8 a.m.-7 p.m., Monday through Thursday, for in-person registration dates Fall, Winter and Spring Quarters (but not for Spring Semester).

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

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

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

#### **regular hours:**

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

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

### **lind hall bookstore**

The Lind Hall Bookstore sells books for courses in the Institute of Technology.

Telephone: 373-3244.

#### **special hours:**

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

#### **regular hours:**

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

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

8 a.m.-7 p.m., Monday through Thursday, for in-person registration dates Fall, Winter and Spring Quarters (but not for Spring Semester).

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

Telephone: 373-4450.

#### **special hours:**

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

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

#### **regular hours:**

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

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

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

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

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

Telephone: 373-0800

#### **special hours:**

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

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

#### **regular hours:**

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

## health sciences bookstore (2-554 unit a)

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

Telephone: 376-4007

### special hours:

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

### regular hours:

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

## b. dalton bookseller

(rosedale, eden prairie center shopping centers)

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

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

B. Dalton will carry a limited number of books for each of the courses off campus (generally 80-90% of estimated enrollment). In some cases it may be necessary for students to purchase books on campus because B. Dalton will have sold all their copies or because they were unable to obtain the required texts. Students wishing to avoid an unnecessary trip to either of the Daltons should call the store carrying books for their course to be sure the books are available. If B. Dalton does not have the books, or has sold out, students should call the campus bookstore which normally carries texts for that course.

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

Fall Quarter and Semester—September 13 to October 12

Winter Quarter —December 28 to January 19

Spring Semester —January 24 to February 18

Spring Quarter —March 14 to April 13

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

## b. dalton in rosedale will carry books for the following locations:

(Phone ahead to reserve your book: 636-1341, Rosedale store)

Brooklyn Center High School	St. Paul Sunray Library
Irondale High School, New Brighton	St. Stephens Church, West St. Paul
Kellogg High School, Little Canada	The Talmud Torah of St. Paul
St. Paul Capitol Complex	Hillside Junior High School, Maplewood

## b. dalton store hours, rosedale (w. highway 36 and fairview ave. n., roseville)

Monday-Friday —9:45 a.m. to 9:45 p.m.

Saturday —9:45 a.m. to 6 p.m.

Sunday —12 noon to 6 p.m.

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

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

Elim Church, Robbinsdale	Richfield Senior High School
Minnetonka Senior High School, Excelsior	Sandburg Junior High School, Golden Valley
Nicollet Junior High School, Burnsville	Southwest High School, Minneapolis

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

Monday-Friday —10 a.m. to 9 p.m.

Saturday —10 a.m. to 6 p.m.

Sunday —12 noon to 5 p.m.



# enrollment information

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## enrollment into extension classes

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

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

Students wishing to register for graduate credit, refer to page 45.

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

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

## counseling and program advising

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

**Counseling**—Professional counseling and testing services are available to Extension students who seek help with personal problems; who want to learn more about their own abilities, interests, and personalities; and who wish help in educational and vocational planning or choosing a major field of study. A fee of \$25 is charged for students and prospective students (\$50 for nonstudents) wishing to take a battery of tests. Appointments must be made in advance.

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

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

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

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

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

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

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

## tuition and fees

The 1976-77 tuition for Extension Classes is:

\$15.50 a credit	For 1XXX and 3XXX level courses Certificate courses Entrance credit courses Noncredit courses (does not necessarily apply to reduced-tuition courses)
\$17 a credit	For 5XXX level courses
\$23 a 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, above).

The full amount of the tuition and other fees is payable at the time of registration. Additional fees may be assessed for use of a laboratory, extra materials, or audio-visual equipment. Tuition charges and fees do not cover books. Checks or money orders must be drawn for the exact amount due, and made payable to the University of Minnesota. A \$2 handling fee is charged for all checks returned by a bank. Students should contact the cashier at 138 Westbrook (376-7243) if they have received notification from their banks that a check has been returned to Extension Classes. **No arrangements for partial payment can be made.** Students in need of financial assistance should see **financial aids and loans**, below. Students who are not residents of the state of Minnesota pay the same fees in Extension Classes as do residents of the state.

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

For information on tax deductions for Extension Classes tuition, see page 55.

## financial aids and loans

All students who plan to register under the authority or with the assistance of any federal, state, or foreign agency—military service, institution, company, or scholarship—may register by mail or in person in 138 Westbrook Hall, telephone 373-4662, on the Minneapolis campus. If registering by mail, authorizations must include the following:

1. **Proper address:** Department of Extension Classes, 138 Westbrook Hall, University of Minnesota

2. **Student's name**
3. **Correct amount of tuition and fees** for specific classes
4. **Term or dates of eligibility**
5. **Authorizing signature** or stamp required
6. **Authorizations** reproduced by a copy machine are **not acceptable**
7. **Complete address of agency** to be billed for tuition.

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

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

All materials should be sent to 138 Wesbrook Hall.

Registration forms must be properly filled out.

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

Students registering under the authority of the Cold War Veterans Bill (Chapter 34, Title 38, U.S. Code), should refer to page 40.

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

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

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

**Extension Loan Fund**—Extension students who require financial assistance to pay tuition may be eligible for a loan not to exceed \$75 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 in 138 Wesbrook Hall during any official in-person registration period for Extension classes. Because only limited funds are available, students who need assistance should inquire as soon as possible during the in-person 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 Wesbrook 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 who is located at the West Bank Bursar's Office (373-7915).

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

For an application form, write to **Extension Counseling, University of Minnesota, 314 Nolte Center, Minneapolis MN 55455**. Telephone 373-3905. Preference will be given to students in the fields of history, education, art, and audio-visual education.



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

Esther Friedman Remington is a valued friend of CEE.

**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 (296-6090). **Veterans with service-connected disabilities** may be eligible for vocational rehabilitation services through the Veterans Administration. Write or call the Veterans Assistance Center, Room 181 Federal Building, Fort Snelling, St. Paul, Minnesota 55111 (726-4454). **Financial aid for other handicapped students** may be available through the Minnesota Division of Vocational Rehabilitation. Information concerning that program may be obtained from the Division of Vocational Rehabilitation Liaison Office, 1821 University Avenue, Room 180, Griggs-Midway Building, St. Paul MN 55104 (612-646-7841) or from the Division of Vocational Rehabilitation office in your area.

**Federally Insured 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 three to four months before the funds are required. Repayment begins in the 10th month after students have ceased their course of study. At that time all students pay seven percent interest.

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

**Basic Opportunity Grant**—The BOG is a federal aid program designed to provide financial assistance for part-time and undergraduate full-time students working toward degrees or certificates. Generally, grants are given to low-income students. The maximum award is \$1400, less the amount students and their families are expected to contribute. The amount of the grant is based on the family contribution, the amount of funds available for the program, and the cost of education at the University, since the grant cannot exceed one-half of that cost. Further information: 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. Borrowers can then write checks which would normally overdraw their account. The loan is repaid through automatic deductions from the checking account, with finance charges typically running slightly over 12 percent on an annual percentage rate. Students should contact a bank for further information.

**Regents' Scholarships**—University staff members working at least 75% time are eligible to apply for Regents' Scholarships through the Training Division. Regents' Scholarships cover only tuition for approved classes. All course fees, special fees and late fees must be paid by the student. Further information about eligibility and application procedures can be obtained from the Training Division, 404 Johnston Hall, 373-4366.

Students registering with Regents' Scholarships for nonlimited-enrollment courses may register by mail or in person. The approved authorization must accompany your registration forms. Late fees go into effect at the end of the in-person registration period. **Students wishing to register for limited-enrollment classes with Regents' Scholarships may not do so during the first week of mail registration but may register by mail thereafter.** Students may obtain space by telephone or in

person. See the **When and How to Register** section for the dates and hours of each term. Be sure to include the approved Regents' Scholarship form, completed registration forms, a check made payable to the University of Minnesota for special, course, or late fees (*if any*), and the limited class card (*only if the class has limited enrollment*) if you register by mail. **No refunds will be given to students wishing to apply Regents' Scholarships toward limited-enrollment classes for which they have already registered and paid fees.**

**Other financial aids**—For information about the National Direct Student Loan, the Supplementary Educational Opportunity Grant, the College Work-Study Program, and the Minnesota State Scholarship and Grant Program, contact Student Financial Aid, 107 Armory (373-4021).

## **military information**

### **personnel**

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

All branches of the Armed Services now provide Off-Duty Academic Instruction or Tuition Assistance Programs for military personnel on active duty. There are no application forms necessary for admission to the Department of Extension Classes. Under these programs, eligible military personnel may be entitled to tuition assistance of 75 percent a quarter credit hour for approved classes. (All classes in the *Extension Classes Bulletin* are quarter credit whether designated quarter or semester length.) The remaining tuition and all fees must be paid by military personnel. Interested members of the Armed Services are urged to contact the educational officer or commanding officer of their command for proper authorization to participate in these programs. Written authorization designating classes and amount of tuition to be paid by Army, Navy, Air Force, or Marine Corps should be presented at time of registration, at which time payment of remainder of tuition must be made. Military personnel who do not have the necessary authorization at the time of registration will be required to pay in full for their registration. When the government authorization is received, a refund for the authorized amount will be made. Registration must be made in person at 101 Westbrook Hall, Minneapolis campus.

### **veterans**

After reading the information below, questions can be directed to the Extension Veterans Office, 138 Westbrook Hall (373-5777); Veterans Assistance Office, 6 Morrill Hall (373-9891); or Veterans Counselor, 314 Nolte Center (373-3905).

**Cold War Veterans** (Chapter 34, Title 38, U.S. Code)—A G.I. bill providing educational benefits for eligible veterans became effective June 1, 1966. Eligibility is based on active military service on or after February 1, 1955. Maximum period of training is 36 months with an additional 9 months for undergraduates; but this period is reduced by training under other Veterans Administration programs.

**Application** for training under this bill may be made by requesting VA Form 22-1990. The application form must be completed and submitted to 138 Westbrook with a photostatic copy of DD 214 (discharge papers) and Cold War Veterans information sheet when registering for Extension Classes. **Do not** submit original documents. In-person registration is encouraged for those veterans registering for the first time under the G.I. Bill.

**Registration**—Before registering, please read pages 22-25 in regard to new registration procedures. Each time a veteran registers for Extension classes and

wishes certification to the Veterans Administration, a Cold War Veterans information sheet must be completed. This sheet will be mailed when the appropriate box is checked on the request post card in the back of this *Bulletin*. Please complete **only one** information sheet for each registration period. (Fall quarter and semester are considered *one* registration period.) If you are registering for limited-enrollment classes by mail and one or more of them is closed, Extension Classes will return the information sheet to you. If you wish to add classes to your registration, return the information sheet along with the additional registration forms and payment. If you do not wish to add classes to your registration, return the information sheet to 138 Westbrook Hall along with a note indicating your registration is completed and certification to the Veterans Administration should be made. In either case, if you do not return the information sheet, no certification will be made to the Veterans Administration.

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

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

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

MINIMUM CREDITS	DEPENDENTS			Each Dependent Over Two
	None	One	Two	
Full Time..... 12	\$270	\$321	\$366	\$22
¾ Time ..... 9	203	240	275	17
½ Time ..... 6	135	160	182	11

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

**Credits**—1) When registering for both quarter and semester classes, it is important to note that any change in credit load at the conclusion of a term may result in reduction of payments. (For example: a veteran taking 8 fall quarter credits and 4 fall semester credits is carrying only 4 credits at the end of fall quarter. To maintain full-time status he or she must register for 8 winter quarter credits and likewise, 4 spring semester credits and 8 spring quarter credits.) 2) Over one-half of the credits earned must be through classroom instruction.

**Tuition and fees**—1) Veterans must pay at the time of registration. They will be reimbursed later or paid a monthly allowance. 2) **Advance pay**—This will enable veterans to have an advance check waiting when registering. Forms can be picked up at the Extension Veterans Office. All checks mailed to the University by the Veterans Administration are mailed to the home address of the veteran only if the veteran is registered. If you have not received your first check eight weeks from your date of registration, call 373-5609 to have a trace placed on your check. The dates for applying for advance pay begin four weeks before each in-person registration period and last for one week. No advance payments will be issued for summer classes. 3) **60-day deferments**—This can be used only ONCE during an academic year and cannot be used in combination with advance payments. Tuition must be paid 60 days after the last day of official in-person registration. No exceptions will be made; failure to pay fees will result in a hold placed on the student's records. A \$10 late fee will also be charged, plus a \$2 hold fee.

Application may be made through the Extension Veterans Office. Application for the 60-day deferment must be made prior to registration so the form can accompany the registration materials.

**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 \$60 a month.

This is in addition to the regular monthly rate of educational assistance allowance payable while in pursuit of the approved program of education. Tutorial assistance is limited to a maximum of \$720. 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).

**Satisfactory Academic Progress**—In each state, a State Approving Agency (SAA) is appointed by the governor to be responsible for establishing minimum criteria of satisfactory academic progress and for approving procedures of each institution. In Minnesota, the responsibility has been delegated to the Division of Vocational-Technical Education in the State Department of Education.

The SAA has established a new set of guidelines to define satisfactory academic progress. Those regulations, in brief, require a veteran each quarter to pass and receive credit for a minimum of 12 credits if registered for full-time benefits, 9 credits if registered for  $\frac{3}{4}$  time, and 6 credits if registered for  $\frac{1}{2}$  time. If the veteran fails to meet that standard for two terms in a row, the University is required to send notification to the Veterans Administration.

For Veterans Administration purposes the following grades are considered satisfactory: A, B, C, D, S, X, and I. The I is considered a satisfactory grade until the end of the next term. If by that time the incomplete has not been made up, the credits will not count in the credits-passed total.

The University is also required to report to the Veterans Administration all student veterans who fail to pass half of their credits registered for each term. For example, a veteran who is registered for six credits must complete three. Such a report will be sent to the V.A. at the end of the first such term.

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

**State of Minnesota—Department of Veterans Affairs**—Educational assistance to veterans not to exceed \$250 once, for the payment of tuition of honorably discharged veterans who entered the service from the state of Minnesota. This allowance is available to assist them in completing their educational objective after they have exhausted Federal G.I. Bill education benefits. Only Minnesota schools are permitted under this program.

This department may offer \$250 a year to qualified war orphans who are attending institutions of higher learning or trade schools beyond high school. To qualify, the student must have lost his or her parent through death because of a service-caused condition. The parent must have been a resident of the state of Minnesota at the time of entry into service. The \$250 allowance may be used for tuition (where applicable), fees, board, room, books and supplies, and other legitimate expenses.

Such veterans or war orphans, if they believe themselves eligible, should contact State of Minnesota—Department of Veterans Affairs, Veterans Service Building, St. Paul MN 55155. Phone 296-2562.

**Discharge Review Service**—A service is available to veterans with less than honorable discharges which provides legally trained staff to assist them in their application for a review and possible recharacterization of their discharge. The

service also provides assistance for veterans in their attempt to obtain eligibility for V.A. benefits. No fee is charged for this service. Those interested should contact the Discharge Review Service, 1633 Eustis Street, St. Paul MN 55108 (376-5085).

## prerequisites

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

## grades

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

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

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

Choice of A-N or S-N grading system must be indicated for each course listed on the registration form at the time of registration, **and may not be changed after the second week of a quarter or the third week of a semester** (there is no fee for changing). Changes can be made in person or by writing or calling the Department of Extension Classes, 101 Wesbrook Hall, University of Minnesota, Minneapolis MN 55455 (373-3195). If the student does not indicate the grading system desired on the registration form, the A-N system will apply.

A symbol of I (incomplete) will be assigned when, in the opinion of the instructor, there is a reasonable expectation that the student can complete successfully the work of the course. Student and instructor should arrive at a clear understanding

in advance as to whether the student may receive an I and what the conditions will be. An I that is not made up by the end of one year becomes an N. When an I is changed to a permanent grade (within the one-year period), the I is removed from the student's record.

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

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

The **symbol V** (visitor) indicates registration as an auditor or visitor (see **auditors**, page 48).

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

## grade reports and transcripts

Extension students can secure **transcripts** showing all credits earned in Extension Classes by visiting 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*. Grades are mailed from Extension Records, window 20, Morrill Hall—telephone 373-2464. 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.

## credit and no credit registrations

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### credits

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

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

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

**Residence**—Credits earned in undergraduate Extension Classes are residence credits; however, until students have been formally admitted to the college from which they expect to obtain a degree, these credits are not considered to meet the residence requirements of individual colleges of the University. See University Degree Programs, page 353.

2. **"Certificate credit"** means that the course so marked may be used in appropriate Extension certificate programs. Certificate credit courses are University-level courses but do not carry degree credit. See University Certificate Programs, page 374.
3. **"Entrance credit"** designates a course which may be used to meet University admission requirements.
4. **"No credit"** means that no credit is given for the course, although grades may be assigned (except for students registered on any reduced no-credit tuition plan).

**Recording Extension Credits**—Credits earned in Extension are entered initially on an Extension record. College of Liberal Arts, College of Business Administration, College of Education, Institute of Technology or General College students wishing to have degree credits earned in Extension Classes put on their degree transcript, should ask the record clerk (in Morrill Hall) of the college in which they are registered, 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. See **Grade Reports and Transcripts**, page 44.

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

## graduate credit

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

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 MN 55455 (373-5817).

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

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

transcript. **The inclusion on a CEE transcript of courses taken at the graduate level does not guarantee either admission to the Graduate School or acceptance of courses on a graduate program.**

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

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

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

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

## **credits obtainable without required class attendance**

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

### **independent study "y" registration**

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

Independent study can be arranged for any course so identified by an academic department, whether it is offered 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).

### **extra credit "x" registration**

Students may register in a degree credit course for 1, 2, or 3 extra credits (beyond those a course carries) provided the course instructor approves. Fees are charged on the basis of number of credits for which a student is registered. The student



works independently, meeting requirements set by the instructor. Extra credit study allows for more intensive study of a course topic or study in a related topic in which no regular course is offered. Department and instructor approval is necessary and a special form for that purpose with the appropriate signatures must be presented at time of registration. Registration is then completed in the usual manner but with a capital "X" after the course number. For the special permission form and for further assistance in making an "X" registration, consult the Counseling Department, 314 Nolte Center (373-3905).

## **directed studies, directed research registration**

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

## **special examination**

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

## **college-level examination program (clep)**

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

## **university college independent study**

University College can grant up to 15 credits to any one student for an independent undergraduate study project done outside the confines of formal course work. Students need not be University College registrants; however, they must have permission from their college office to pursue a program of independent study in University College. They must also have an appropriate faculty

member supervise their project. Ordinarily, projects that can be done through departmental readings courses or directed studies projects are not acceptable for UC 3075. Further information may be obtained from the Counseling Department, 314 Nolte Center (373-3905); or from the University College Office, 105 Walter Library (373-4638).

## independent study through correspondence

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

## radio courses

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

## television courses

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

Non-credit viewers may purchase a study guide from the Department of Independent Study, 27T Wesbrook Hall, University of Minnesota, Minneapolis 55455.

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

## auditors (no credit)

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

Requests for change from credit registration to audit registration are made in person or by writing or calling the Department of Extension Classes, 101 Wesbrook Hall, University of Minnesota, Minneapolis, MN 55455 (373-3195). After the sixth week of a quarter class or the ninth week of a semester class, requests for change must be approved by the instructor; approval is granted only if the student is doing passing work at the time of the request. No changes can be made during the last two weeks of any term. No student whose tuition and fees are paid in whole or in part by military, Veterans Administration, company or scholarship

funds may register as an auditor. Changes from audit to credit will not be allowed after the second week of the quarter or third week of the semester. Courses audited are officially recorded on the student's University record and transcript. (See also **reduced-tuition plans**, below.)

## reduced-tuition plans (no credit)

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

Registration dates (pages 23-24) and procedures (page 22) for ♦ courses are no different than for any nonlimited-enrollment credit class.

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

♦ **Half-price plan**—Any class marked with a ♦ may be taken for no credit at one-half the regular tuition. (A \$10 transfer fee will be charged for transfer from half-price to credit registration, or from credit registration to half-price.)

♦ **Plus-62 plan**—Individuals age 62 or older may register for the marked classes free. For further information on Plus-62, see page 50.

♦ **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 must assume the responsibility for judging the appropriateness of the class sessions for the young guest. Only unusually mature and genuinely interested young persons who can benefit from college-level lectures and discussions designed for adults should be invited to attend.

Students will have to pay the regular transfer fee when transferring from ½ price to full price. Students may not transfer from ½ price to full price or full price to ½ price after the first two weeks of class. No transfer fee is charged for transferring from credit to ½ price, nor will a refund be made.

## informal courses (no credit only)

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

Youth age 12 to 16 may register for certain IC classes (see **course descriptions for courses which apply**) for \$3 when accompanied by an adult registered in the same class.

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

## sampler lectures, \$1 (no credit)

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

*The Composer's Process*  
*Understanding the Weather Map*  
*Religion and Architecture*

*Wills and Probate*  
*The Curious Case of Sherlock Holmes*  
*Why People Buy: the Hidden Persuaders*

Registration for Sampler lectures must be made in advance. Call 373-3039 or write to University Sampler, 202 Westbrook Hall, University of Minnesota, Minneapolis, MN 55455. Ask for a schedule of topics in the "University Sampler."

## **persons 62 and older.**

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

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

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

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

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

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

For information on the availability of space in limited-enrollment classes, telephone **376-1371**.

# rules regulations policies

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## fee statements

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

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

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

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

## changes in course information

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

## attendance in classes

Students (including auditors) are responsible for attending classes in which they are registered. (See also **credits obtainable without required class attendance**, page 46.) A student who cannot attend a class session should arrange with the instructor—in advance, if possible—to make up the work.

## transferring classes

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

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

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

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

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

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

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

Students will have to pay the regular transfer fee when transferring from ½ price to full price. Students may not transfer from ½ price to full price or full price to ½ price after the first two weeks of class. No transfer fee is charged for transferring from credit to ½ price, nor will a refund be made.

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

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

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

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

## transfers within the university

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

## transfers from other institutions

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

## records

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

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

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

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

# **cancellations**

## **cancellations (how to drop a course)**

Students who wish to cancel a class or classes must do so officially, either in person or by writing to the Department of Extension Classes, 101 Wesbrook Hall, University of Minnesota, Minneapolis, MN 55455. By so doing, they will, if eligible, receive a refund (see **refunds**, page 55), and will likewise insure entry of the appropriate symbol on their grade report. If students officially cancel the first two weeks of a term, the course they cancel will not appear on a transcript. If students officially cancel from a class before or during the ninth week of any semester, or the sixth week of any quarter, or mid-point of any special term, they will automatically receive a "W" (withdrawal) on the grade report. This symbol means "official cancellation without grade." If students cancel after the above-stated period, the instructor may give them a "W" if students are doing passing work. It is advisable that students inform their instructor of the reason for canceling.

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

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

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

**No instructor is authorized to accept cancellation of any registration.**

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

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

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

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

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

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



## refunds

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

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

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

Cancellations by mail are effective the date of postmark.

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

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

See refunds for athletic facilities fees, page 346; health service fees, page 348; Regents' Scholarships, page 39; reduced-tuition courses, page 49.

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

## tax-deductible educational expenses

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

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

## **grievance procedures**

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

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

## **committee on student relations and academic standing**

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

# course offerings

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Courses printed in **red ink** in this *Bulletin* are limited-enrollment classes. Nonlimited-enrollment classes which have limited-enrollment sections have sections printed in red. In order to enroll in limited-enrollment classes or sections, a student **must** secure a limited-enrollment class card before attending the class. See **When and How to Register, page 11.**

**Courses in this section** are listed alphabetically by department. See page 405 for a list of **departments and department abbreviations**, and page 406 for **buildings** and their abbreviations.

**Course numbering** is explained on page 402.

**See index** (page 433) for page numbers of individual departments.

**Maps** begin page 407.

**Abbreviations and addresses for off-campus classes** appear on page 403.

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

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

Accounting	Industrial Relations
Agricultural and Applied Economics	Insurance
Anatomy	Italian
Anthropology	Japanese
Arabic	Journalism and Mass Communications
Art History	Linguistics
Arts, Studio	Management
Astronomy	Marketing
Biology	Mathematics
Business, Government, and Society	Mechanical Engineering
Business Law	Music
Chemistry	Natural Science
College of Life Underwriters	Norwegian
Design	Persian
Ecology and Behavioral Biology	Personal Orientation
Economics	Physics
Engineering Graphics	Polish
English	Political Science
Finance, Business	Psychology
Finnish	Public Health
French	Real Estate
General College	Russian
Geology and Geophysics	Sociology
German	Swedish
Greek	Textiles and Clothing
History	Transportation
Industrial Engineering/ Operations Research	



## **accounting (Acct)**

Your attention is called to the Accounting Certificate Program; page 385; and to General College business studies.

*Kenneth Abeln, CPA, Staff Auditor, Laventhol & Horwath*  
*David Beckley, Manager, Haskins & Sells*  
*Ulysses Skip Bennett, Corporate Manager, General Mills*  
*James Bevacqua, Internal Auditor, Burlington Northern*  
*Arthur H. Cobb, Staff Accountant, Price Waterhouse*  
*Lou Davenport, Auditor, Haskins & Sells*  
*Will Dombrowske, Treasurer, Vice President, Deltak Corporation*  
*Bruce Duckworth, Staff Accountant, Anderson, Lieser & Thorsen*  
*William Duma, President, First National Bank of St. Paul*  
*Joseph E. Edell, Vice President, Finance American National Bank of St. Paul*  
*R. Wendell Ellis, Assistant Treasurer, Fingerhut Corporation*  
*James Fischer, Division Controller, General Mills*  
*Edmund Gottlieb, Partner, Breitman, Orenstein & Schweitzer, CPAs*  
*Jack Gray, Professor of Accounting*  
*Todd Helmeke, Senior Consultant, Peat, Marwick, Mitchell & Co.*  
*Herbert Ihle, Director, Control & Finance for Grocery Products, Pillsbury*  
*Fred Jacobs, Assistant Professor of Accounting*  
*Barry Jones, Financial Analyst, General Mills, Inc.*  
*Larry Kahler, Auditor, Peat, Marwick, Mitchell & Co.*  
*Joseph Kalaidis, Systems Specialist, Control Data*  
*Thomas Kaliher, CPA, Kaliher, Belanger & Co., CPAs*  
*Robert Katz, Partner, Alexander Grant & Co.*  
*Roger Katzenmaier, Vice President, Wilkerson, Guthman & Johnson, CPAs*  
*Fred Kickertz, Consultant, Peat, Marwick, Mitchell & Co.*  
*Joseph Kimmel, Director, Financial Planning, Oven Eze Foods, Pillsbury*  
*Charles Ladd, Manager, Peat, Marwick, Mitchell & Co.*  
*William Lang, Accountant, Control Data Corp.*  
*Steve Lukas, Corporate Accounting Manager, Cardiac Pacemakers, Inc.*  
*Doris Meyerding, Faculty, North Hennepin Community College*  
*Lynn Odland, Manager, Haskins & Sells*  
*David Palmer, Manager Market Analysis, Litton Microwave Cooking Products*  
*Leon Radde, Manager of Corporate Audit, Investors Diversified Services*  
*Leonard Rapoport, Partner, Alexander Grant & Co.*  
*Floyd Romslo, Assistant Professor, School of Public Health*  
*Robert Ronay, Administrative Assistant in Accounting*  
*Lyle Shaw, Senior Auditor, Arthur Young & Co.*  
*George Squires, Financial Analyst, General Mills*  
*Joe Toone, Manager, Federal Income Taxes, Bemis Company*  
*Richard B. Troxel, Partner, Peat, Marwick, Mitchell & Co.*  
*Dick Wallen, Minnesota Energy Agency*  
*David O. Wanglie, Budget Manager, Fingerhut Corporation*  
*John Zehnder, International Financial Accountant 3M Company*  
*Robert K. Zimmer, Professor and chairman of Accounting*

★**Acct 0130C-0131C INCOME TAX ACCOUNTING.** 3 certificate credits each semester (4 degree credits on completion of both courses consecutively). \$46.50 each semester.

Principles involved in determining taxable net income and computation of federal and state income taxes for individuals, partnerships, and corporations. **Must be taken A-N.** (Prereq 1026 or 1051 for 0130C; 0130C for 0131C. Limited to 35 students)

**Fall Sem 0130C Sec 1 M—8:15-9:55, BlegH 230**

**Sec 2 T—7-8:30, Sandburg JHS 204, Golden Valley**

**Spring Sem 0131C Sec 3 M—8:15-9:55, BlegH 230**

(See also Acct 5300, Advanced Taxation.)

## first year accounting courses

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

Introduction to basic financial accounting concepts and their application to the recording and reporting of business events. (No prereq)

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

Accounting analysis and reports for management and investor decision making. (Prereq 1050 or 1024 and 1025)

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

Persons with prior background or training may receive credit in one or both of these courses by passing an advanced standing examination. Students accepting credit will pay \$20 for each examination. These examinations will be given at the following times in BA 130:

**Acct 1050 Wednesday, Sept. 15, 7 p.m.**

**Wednesday, Dec. 1, 7 p.m.**

**Wednesday, Mar. 3, 7 p.m.**

**Acct 1051 Thursday, Sept. 16, 7 p.m.**

**Thursday, Dec. 2, 7 p.m.**

**Thursday, Mar. 4, 7 p.m.**

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

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

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

**Acct 1050-1051 PRINCIPLES OF ACCOUNTING.** 4 degree credits each term, \$62 plus \$1 special fee. Total \$63 each term.

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

### MINNEAPOLIS CAMPUS, WEST BANK

**Fall Qtr 1050 ★Sec 1 MTh—6-7:45, BlegH 230, 210, 215, 220, 360, 245**  
(Limit 210 students)

Symbols, abbreviations, off-campus class locations begin on page 401.

	★Sec 2	MTh—8-9:45, BlegH 110, 210, 215, 220, 225, 245 (Limit 210 students)
	1051 ★Sec 3	MTh—6-7:45, BlegH 110, RarigC 616 (Limit 70 students)
	★Sec 4	MTh—6-7:45, ForH 130, 150 (Limit 70 students)
Fall Sem	1050 Sec 5	Sa—8:45 a.m.-11:15, BlegH 125
Winter Qtr	1050 ★Sec 6	MTh—6-7:45, BlegH 110, 205, 210 (Limit 105 students)
	★Sec 7	MTh—8-9:45, BlegH 110, 205, 210 (Limit 105 students)
	1051 ★Sec 8	MTh—6-7:45, ForH 130, 150, 155 (Limit 105 students)
	★Sec 9	MTh—8-9:45, ForH 130, 150, 155 (Limit 105 students)
Spring Sem	1050 Sec 10	Sa—8:45 a.m.-11:15, BlegH 125
	1051 Sec 11	Sa—8:45 a.m.-11:15, BlegH 135
Spring Qtr	1050 ★Sec 12	MTh—6-7:45, BlegH 230, 240 (Limit 70 students)
	★Sec 13	MTh—8-9:45, BlegH 240, 255 (Limit 70 students)
	1051 ★Sec 14	MTh—6-7:45, BlegH 145, 135 (Limit 70 students)
	★Sec 15	MTh—8-9:45, BlegH 145, 135 (Limit 70 students)

(For additional help, a supervised accounting lab will be open M and Th—7-9; T—6-8; W—5-7; and Sa—11:15 a.m.-1:15, BA 128)

#### SANDBURG JUNIOR HIGH SCHOOL, GOLDEN VALLEY

Fall Sem	1050 Sec 16	Th—6:45-9:15, room 204
Spring Sem	1050 Sec 17	Th—6:45-9:15, room 204
	1051 Sec 18	Th—6:45-9:15, room 205

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

#### RICHFIELD SENIOR HIGH SCHOOL

Fall Sem	1050 Sec 19	M—6:45-9:15, room 141
Spring Sem	1050 Sec 20	M—6:45-9:15, room 141
	1051 Sec 21	M—6:45-9:15, room 142

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

#### KELLOGG HIGH SCHOOL, LITTLE CANADA

Fall Sem	1050 Sec 22	W—6:45-9:15, room 168-170
Spring Sem	1050 Sec 23	W—6:45-9:15, room 168-170
	1051 Sec 24	W—6:45-9:15, room 167-169

(For additional help, a supervised accounting lab will be open W, 5-6:45, room 168-170)

#### ST. PAUL CAPITOL COMPLEX

Fall Sem	1050 ★Sec 25	M—7-9:30, Administration Bldg 116A (Limit 35 students)
Spring Sem	1051 ★Sec 26	M—7-9:30, Administration Bldg 116A (Limit 35 students)

★Acct 3105-3106, 3107 INTERMEDIATE ACCOUNTING. 3 degree credits each term, \$3160 for 3107. \$46.50 each term.

Second-year accounting for students intending to specialize in accounting or in business finance. **3105:** Historical review of search for accounting principles, present value analysis and price level indices, nature and measurement of income and funds flow. **3106:** Accounting for acquisition and subsequent measurement of business assets. **3107:** Accounting for equities, including creditors' equity and

Symbols, abbreviations, off-campus class locations begin on page 401.

owners' equity for corporations, proprietorships, nonprofit organizations and consolidated entities. Analysis and interpretation of financial statements. **Must be taken A-N.** (Prereq 1025 or 1050 and Econ 1001 and 1002 for 3105 [see page 60 for advanced standing examinations]; 3105 and Math 1131 or equiv or § for 3106; 3105 for 3107. Limited to 35 students).

#### MINNEAPOLIS CAMPUS

Fall Qtr	3105	Sec 1	M—6-8:30, BlegH 260
	3105	Sec 2	W—6-8:30, BlegH 255
	3107	Sec 3	M—6-8:30, BlegH 255 (Limit 40 students)
Winter Qtr	3106	Sec 4	M—6-8:30, BlegH 260
	3106	Sec 5	W—6-8:30, AndH 330
Spring Qtr	3107	Sec 6	M—6-8:30, BlegH 260

#### RICHFIELD HIGH SCHOOL

Fall Qtr	3105	Sec 7	M—7-9:30, room 142
	3105	Sec 8	W—7-9:30, room 142
Winter Qtr	3106	Sec 9	M—7-9:30, room 143
	3106	Sec 10	W—7-9:30, room 143
Spring Qtr	3107	Sec 11	M—7-9:30, room 143

#### KELLOGG HIGH SCHOOL, LITTLE CANADA

Fall Qtr	3105	Sec 12	M—6:30-9, room 233
	3105	Sec 13	W—6:30-9, room 233
Winter Qtr	3106	Sec 14	M—6:30-9, room 233
	3106	Sec 15	W—6:30-9, room 233
Spring Qtr	3107	Sec 16	M—6:30-9, room 233

**★Acct 3160 ANALYSIS OF FINANCIAL STATEMENTS.** 4 degree credits, \$3107. \$62.

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

Spring Sem	Sec 1	M—6-8:30, BlegH 105
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**★Acct 3220-3221 COST ACCOUNTING.** 3 degree credits each semester, \$3255. \$46.50 each semester (plus \$4 course fee for 3221. Total \$50.50 for 3221 only).

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

Fall Sem	3220	Sec 1	M—6-7:45, BlegH 335
		Sec 2	M—8-9:45, BlegH 335
		Sec 3	M—6-7:45, Sandburg JHS 204, Golden Valley
Spring Sem	3221	Sec 4	M—6-7:45, BlegH 225
		Sec 5	M—8-9:45, BlegH 225

**★Acct 5125 AUDITING PRINCIPLES AND PROCEDURES.** 4 degree credits, \$68.

Verification of financial data, including consideration of auditing procedures and their application. Preparation of working papers and audit reports is emphasized. **Must be taken A-N.** (Prereq 3102 or 3107. Limited to 35 students. May not be taken for graduate credit)

Fall Qtr	Sec 1	MTh—6-7:45, Sandburg JHS 209, Golden Valley
Fall Sem	Sec 2	T—6-8:45, BlegH 225
	Sec 3	Sa—9 a.m.-11:45, BlegH 225

Symbols, abbreviations, off-campus class locations begin on page 401.



★Acct 5126 **MODERN INTERNAL AUDITING.** 4 degree credits. \$68.

Modern internal auditing; development of audit programs, performance of computer audits and internal auditor's role in the overall management process. **Must be taken A-N.** (Prereq 3220-3221 or 3201 and §. May be repeated for credit. Limited to 35 students. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Sem** Sec 1 **M**—6:20-8:50, BlegH 335

★Acct 5180 **ADVANCED ACCOUNTING.** 4 degree credits, \$68.

Consolidated statements, fiduciary and fund accounting, partnership accounting, foreign exchange. **Must be taken A-N.** (Prereq 3102 or 3107 or 13107. Limited to 35 students. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Sem** Sec 1 **W**—6-8:30, BlegH 225

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

Sec 3 **W**—6:20-8:50, BlegH 210

★Acct 5270 **REPORTING FOR MANAGEMENT CONTROL.** 4 degree credits, \$68.

Responsibility accounting; transfer pricing problems; capital budgeting; management control systems. Cases covering both profit and not for profit organizations. **Must be taken A-N.** (Prereq 3220. Limited to 30 students. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Sem** Sec 1 **M**—8:15-9:55, BlegH 404

**Spring Sem** Sec 2 **M**—6-7:45, Sandburg JHS 204, Golden Valley

★Acct 5300 **CURRENT TOPICS IN ADVANCED TAXATION.** 4 degree credits each quarter, \$68 each quarter.

**Must be taken S-N.** (Prereq 5135 or 0131C or §. May be repeated for credit. Limited to 35 students. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 **TTh**—6-7:45, BlegH 255

## adult psychiatry (AdPy)

(Your attention is called to the Adult Psychiatry Certificate, page 374)

### TRAINING PROGRAM FOR MENTAL HEALTH WORKERS

The first course, AdPy 0101C, will be offered Fall Quarter for 3 certificate credits. Tuition is \$60. The course is designed to provide students with an understanding of human growth and behavior in a continuum that ranges from normal to abnormal, and to survey the latest trends in the mental health movement. Formal presentations will be followed by small-group experience. (Prereq §. Limited to 75 students)

The second course, AdPy 0102C, will be offered Winter Quarter for 3 certificate credits. Tuition is \$60. The course is designed to survey various psychological frameworks that can be utilized in working with groups and families. Formal presentations will be followed by small-group experience. (Prereq 0101C. Limited to 75 students)

The third course, AdPy 0103C, will be offered Spring Quarter for 3 certificate credits. Tuition is \$60. The course is designed to provide students with an introduction to a variety of theories of psychotherapy, such as Gestalt theory, transactional analysis, Bioenergetics, etc., and to the ways in which these may be applied to clinical practice. Formal presentations will be followed by small-group experience. (Prereq 0102C. Limited to 75 students)

The classes will be held Wednesday afternoons from 3-6 p.m. at Metropolitan Medical Center.

Symbols, abbreviations, off-campus class locations begin on page 401.

Registration forms are available only through the Department of Continuing Education in Social Work, 331 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.

## aerospace engineering and mechanics (AEM)

(See also Professional Development Recognition Program in Engineering and Science, page 127)

*Stewart E. Almleaf, Ground School Director, Commercial Pilot—Single and Multi engine Land, Single Engine Sea, Instrument Rating, Gold Seal Flight Instructor—Airplanes and Instrument, and Advanced Ground Instructor*  
*Gordon S. Beavers, Professor of Aerospace Engineering and Mechanics*  
*Michael G. Bohn, Chief Flight Instructor*  
*William L. Garrard, Associate Professor of Aerospace Engineering and Mechanics*  
*John P. Moran, Associate Professor of Aerospace Engineering and Mechanics*

## ground school courses for air pilots— general information

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

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

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

**AEM 3009 BASIC GROUND SCHOOL FOR PRIVATE PILOTS.** 5 degree credits. \$77.50 No-credit registration (\$50) may be made at Anoka County Airport for courses held there.

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

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

The Aerospace Engineering and Mechanics Department awards 5 degree credits by petition to students who have satisfactorily completed the course, and who have also received 3 hours of certified dual flight instruction from any certified flight instructor at any airport and at any time. Evidence to substantiate this flight instruction should be submitted to the ground school instructor in the form of a pilot's log book or flight school invoices.

**Fall Qtr**    Sec 1    **TTh**—7-9:40, Aero 209, Almleaf  
                   Sec 2    **TTh**—6:30-9:00, University Flight Facilities, Anoka County  
   Airport, 2289 County Rd J; Bohn

Symbols, abbreviations, off-campus class locations begin on page 401.

<b>Winter Qtr</b>	Sec 3	<b>TTh</b> —7-9:40, Aero 209, Almleaf
	Sec 4	<b>TTh</b> —6:30-9:00, University Flight Facilities, Anoka County Airport, 2289 County Rd J; Bohn
<b>Spring Qtr</b>	Sec 5	<b>TTh</b> —7-9:40, Aero 209, Almleaf
	Sec 6	<b>TTh</b> —6:30-9:00, University Flight Facilities, Anoka County Airport, 2289 County Rd J; Bohn

**AEM 1015 STATICS.** 4 degree credits, \$62.

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, \$62.(IS)

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 Qtr** Sec 1 **TTh**—6:20-8, Aero 225, Moran

**AEM 3036 DYNAMICS.** 4 degree credits, \$62.

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)

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

## afro-american studies (Afro)

(See also Engl 5593, Black Writers of the U.S.; Engl 5597, Contemporary Black Poets; Geog 3141, Africa; Hist 5432, 5433, Problems in Contemporary Africa; and other ethnic studies courses, page 300)

*Reginald Buckner, Assistant Professor of Afro-American Studies and Music Education*

*Charles A. Pike, Instructor in Afro-American Studies*

*John Taborn, Associate Professor of Afro-American Studies*

*Anita Tucker, Assistant Professor of Afro-American Studies*

**Afro 1025 BLACK AMERICANS: SOCIALIZATION, PERSONALITY, AND BEHAVIOR.** 4 degree credits, \$62. (♦\$31)

Development of the Black psyche and of the Black person and his culture. (No prereq)

**Fall Qtr** Sec 1 **T**—6:20-8:50, BlegH 105, Taborn

**Afro 3061, 3062 THE BLACK FAMILY.** 4 degree credits, \$62 each quarter. (♦\$31)

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

**3062:** The contemporary Black family. (No prereq)

**Fall Qtr** **3061** Sec 1 **Th**—6:20-8:50, BlegH 105, Tucker

**Winter Qtr** **3062** Sec 2 **Th**—6:20-8:50, BlegH 105, Tucker

**Afro 3108 BLACK MUSIC: A HISTORY OF JAZZ.** 4 degree credits, \$62. (♦\$31)

Origins, growth, and development of jazz; the economic and sociological factors that influenced its musical development. (Prereq 1301, 3105 or 3301 or §)

**Spring Qtr** Sec 1 **W**—6:20-8:50, BlegH 220, Buckner

(See also Mus 5711, American Popular Music)

Symbols, abbreviations, off-campus class locations begin on page 401.



**Afro 5301 AFRICAN LITERATURE.** 4 degree credits, \$68. (◆\$34)

The literature of contemporary Africa, from Senghor to Ouooloquem, including drama, poetry and the novel. Each genre will be treated as an art form and as an expression of African and human values. All readings are in English. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 M—6:20-8:50, BlegH 255, Pike

## agriculture, college of

See course listings for:

- AGRICULTURAL AND APPLIED ECONOMICS**
- FOOD SCIENCE AND NUTRITION**
- HORTICULTURE**
- SOIL SCIENCE**
- PLANT PATHOLOGY**

### COLLEGE OF AGRICULTURE PROFESSIONAL EXPERIENCE PROGRAM

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

PEP is designed so students may experience real life work for 12 weeks during the fall, winter and spring quarters, and during the summer. A maximum of six credits will be given to those who satisfactorily complete the program. Generally students will be salaried by cooperating firms and agencies. Registration for the program is through the Department of Extension Classes with a fee of \$140 a registrant.

Additional information about PEP is available from the College of Agriculture office, 227 Coffey Hall on the St. Paul campus (373-0923), or from departmental offices and undergraduate advisers of the college.

## agricultural and applied economics (AgEc)

*Dale C. Dahl, Professor of Agricultural and Applied Economics*

*Reynold B. Dahl, Professor of Agricultural and Applied Economics*

### AgEc 1400 AGRICULTURAL MARKETS AND PRICES. 4 degree credits, \$62. (IS)

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

Fall Sem Sec 1 M—6-7:40, ClaOff B25, StP Campus, D Dahl

### AgEc 5480 COMMODITY MARKETS AND FUTURES TRADING. 4 degree credits, \$68.

Economics of cash and futures trading on organized markets; futures trading theory; hedging and speculation. (Prereq  $\$, 1400$ . Qualified students may register for graduate credit at the University of Minnesota)

Spring Sem Sec 1 T—7:55-9:35, ClaOff B25, StP Campus, R Dahl

## agricultural education

(See Vocational and Technical Education)

Symbols, abbreviations, off-campus class locations begin on page 401.

## air pollution

(See Public Health)

## american indian studies (AmIn)

(See also GC 1221, Minnesota History; and other ethnic study courses, page 300)

*Larry Leventhal, Lecturer in American Indian Studies*

*Rich Lundy, Lecturer in American Indian Studies*

*Ruth Voights, Instructor in American Indian Studies*

*Ed Wapp, Instructor in American Indian Studies*

**AmIn 1101, 1102 AMERICAN INDIAN HISTORY: A SURVEY.** 4 degree credits each quarter, \$62 each quarter. (IS 1101) (♦\$31)

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 for Ojibwe and Dakota [see page 359])

**Fall Qtr 1101 Sec 1 Th—6:20-8:50, BlegH 340**

**Winter Qtr 1102 Sec 2 T—6:20-8:50, RarigC 610**

**AmIn 3036 DAKOTA HISTORY AND CULTURE.** 4 degree credits, \$62. (♦\$31)

The study of Dakota history, language and culture based primarily on the oral and written traditions of the Dakota people. These traditions provide an extensive account of tribal origins, migrations, and relationships with other culture groups. (No prereq. May be applied toward the CLA foreign language requirement, Route II for Ojibwe and Dakota [see page 359])

**Spring Qtr Sec 1 Th—6:20-8:50, BlegH 260, Lundy**

**AmIn 5211 THE ARTS OF THE AMERICAN INDIAN.** 4 degree credits, \$68. (♦\$34)

Visual arts of North American Indians, other arts and art traditions in Central and South America. (No prereq. May be applied toward the CLA foreign language requirement, Route II, for Ojibwe and Dakota [see page 359]. Qualified students may register for graduate credit at the University of Minnesota)

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

**AmIn 5920 SEMINAR: SURVEY OF FEDERAL INDIAN LAW.** 4 degree credits, \$68. (♦\$34)

Treaties, legislation, court cases, administrative units are examined both in historical context and as to their vitality today and their effect on Indian identity. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr Sec 1 Th—6:20-8:50, BlegH 260, Leventhal**

## american studies (AmSt)

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

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

*William H. Agee, Lecturer in American Studies*

*Ralph Brauer, Coordinator, University College*

*Karen Hilty, Instructor in American Studies*

*William Wallach, Lecturer in American Studies*

*Marcia Pankake, Lecturer in American Studies*

*Jon Pankake, Lecturer in American Studies*

Symbols, abbreviations, off-campus class locations begin on page 401.

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

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

### B.A. Major Sequence

Required Preparatory Courses

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

### Major Requirements

The major is offered under interdepartmental major provisions

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

3301-3302

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

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

#### AmSt 1101 AMERICAN LIFE. 4 degree credits, \$3111. \$62. (♦\$31)(IS)

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

Fall Qtr      Sec 1    T—6:30-9, LindH 305, Agee  
                  Sec 2    W—7-9:30, Sandburg JHS 204, Golden Valley; Wallach  
Spring Qtr    Sec 3    W—6:30-9, LindH 305, Agee

#### AmSt 1102 AMERICAN LIFE. 4 degree credits, \$3112. \$62. (♦\$31)(IS)

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

Fall Qtr      Sec 1    W—6:30-9, LindH 305, Agee  
Winter Qtr    Sec 2    T—6:30-9, LindH 229, Agee  
                  Sec 3    W—7-9:30, Sandburg JHS 204, Golden Valley; Wallach

#### AmSt 1103 AMERICAN LIFE. 4 degree credits, \$3113. \$62. (♦\$31)

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

Winter Qtr    Sec 1    W—6:30-9, LindH 229, Agee  
Spring Qtr    Sec 2    T—6:30-9, LindH 217, Agee

#### AmSt 1103 AMERICAN LIFE. 4 degree credits, \$3113. \$62. (♦\$31.)

The rise of American nationalism and its relation to American life and thought, and American religious and philosophic attitudes. (No prereq. Meets concurrently with 3113)

Spring Qtr    Sec 3    W—7-9:30, Sandburg JHS 204, Golden Valley; Hilty

#### AmSt 3111 INTRODUCTION TO AMERICAN CIVILIZATION. 4 degree credits, \$1101. \$62.

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

<b>Fall Qtr</b>	Sec 1	T—6:30-9, LindH 305, Agee
	Sec 2	W—7-9:30, Sandburg JHS 204, Golden Valley; Wallach
<b>Spring Qtr</b>	Sec 3	W—6:30-9, LindH 305, Agee

**AmSt 3112 INTRODUCTION TO AMERICAN CIVILIZATION.** 4 degree credits, \$1102. \$62.  
See description for AmSt 1102. (Additional work required for 3112.) (No prereq. Meets concurrently with 1102)

<b>Fall Qtr</b>	Sec 1	W—6:30-9, LindH 305, Agee
	Sec 2	T—8:30-9, LindH 229, Agee
<b>Winter Qtr</b>	Sec 3	W—7-9:30, Sandburg JHS 204, Golden Valley; Wallach

**AmSt 3113 INTRODUCTION TO AMERICAN CIVILIZATION.** 4 degree credits, \$1103. \$62.  
See course description for AmSt 1103. (Additional work required for 3113.) (No prereq. Meets concurrently with 1103)

<b>Winter Qtr</b>	Sec 1	W—6:30-9, LindH 229, Agee
<b>Spring Qtr</b>	Sec 2	T—6:30-9, LindH 217, Agee

**AmSt 3113 INTRODUCTION TO AMERICAN CIVILIZATION.** 4 degree credits, \$1103. \$62.  
The rise of American nationalism and its relation to individualism in American life and thought, religious and philosophic attitudes. (No prereq. Meets concurrently with 1103)

<b>Spring Qtr</b>	Sec 3	W—7-9:30, Sandburg JHS 204, Golden Valley; Hilty
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## american studies topics courses

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

(See other bicentennial courses, page 290)

**AmSt 1920 or 3920 TOPICS: 1776—THE CULTURE OF THE REVOLUTIONARY ERA.** 4 degree credits, \$62. (♦\$31)

The focus will be on a few key personalities (Franklin, Washington, Jefferson, Adams, Paine) as well as events and issues. Literature, painting, music and architecture of the period will be covered. The objective will be to see how the Revolutionary Americans viewed the world and interpreted their experience, to understand their ideals and the methods by which they sought to realize them. (No prereq)

<b>Fall Qtr</b>	Sec 1	M—6:30-9, LindH 305, Agee
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**AmSt 1920 or 3920 TOPICS: 1876—CENTENNIAL AMERICA—PROGRESS AND CONFLICT.** 4 degree credits, \$62. (♦\$31)

A broad study of the culture of the America of a century ago, with special attention to events of the Centennial year of 1876. Topics include the Centennial Exposition at Philadelphia; "Custer's Last Stand" as viewed by whites and by Indians; the culture of a "business society"; the end of "Reconstruction" in the South, and the "corrupt bargain" which resolved the electoral crisis of 1876; the conflict between an expanding society and nature; the rise of modern architecture; the American scene in painting. An attempt will be made to assess the successes and failures of the American "experiment" after a century of national life. (No prereq)

<b>Winter Qtr</b>	Sec 2	M—6:30-9, LindH 305, Agee
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**AmSt 1920 or 3920 TOPICS: 1976—BICENTENNIAL AMERICA—REALITY AND PROMISE.** 4 degree credits, \$62. (♦\$31)

Is America fulfilling the promises implicit in the revolution of two centuries ago? An examination of contemporary American culture, its problems and prospects for the future. Authors include Dickey, Galbraith, Heilburner, Wakefield, and Vonnegut. Motion pictures, painting, music and architecture, as well as any special features of our bicentennial celebration which seem relevant, will be explored. (No prereq)

<b>Spring Qtr</b>	Sec 3	M—6:30-9, LindH 305, Agee
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Symbols, abbreviations, off-campus class locations begin on page 401.

**★AmSt 1920 or 3920 TOPICS: MOVIES AND THE AMERICAN EXPERIENCE.** 4 degree credits, \$62.

**new**

Significant American films will be studied as both artistic and cultural statements. We will explore how the varied facets of film as an art form combine to produce a vision of various aspects of American life. Themes to be explored include individualism, the roles of men and women, and violence. The films tentatively scheduled are: **Birth of a Nation**, Oct. 7; **Modern Times**, Oct. 14; **Citizen Kane**, Oct. 21; **The Big Sleep**, Oct. 28; **She Wore a Yellow Ribbon**, Nov. 4; **Bonnie and Clyde**, Nov. 11; **Ballad of Caleb Hogue**, Nov. 18; **The Last Picture Show**, Nov. 25 (films are shown Thursdays, 7:30 p.m., MNH Aud). **Free tickets on a space-available basis.** Up to four free tickets may be picked up in 101 Wesbrook Hall by students who show a receipted Continuing Education and Extension registration form. **No mail or telephone requests.** Tickets for a particular film are available only during the week the film is shown (see office hours). (No prereq. Limited to 35 students)

**Fall Qtr** Sec 4 **M**—6:20-8:50, NH 122, Brauer

(See other film courses page 291)

**AmSt 1920 or 3920 TOPICS: DEMOCRACY'S NIGHTMARE: AMERICAN VISIONS OF AUTHORITARIANISM.** 4 degree credits, \$62. (♦\$31)

Examination of an undercurrent of American life represented by a simultaneous fear of and fascination with authoritarianism. Despite the continued forms of democratic government, critics of American life have continually summoned up spectres on varying kinds of authoritarianism, illustrated in *The Federalist Papers*, *Walden II*, *The Crucible*; works of Plato and Dostoyevski, DeTocqueville, Sinclair Lewis; and various films. (No prereq)

**Fall Qtr** Sec 5 **Th**—6:30-9, LindH 305, J Pankake, M Pankake

**AmSt 3301 PROSEMINAR: AMERICAN STUDIES.** 4 degree credits, \$62.

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, LindH 315, Agee

**AmSt 3302 PROSEMINAR: AMERICAN STUDIES.** 4 degree credits, \$62.

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, LindH 315, Agee

**AmSt 3303 PROSEMINAR: AMERICAN STUDIES.** 4 degree credits, \$62.

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, LindH 315, Agee

## **anatomy (Anat)**

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

*David Coulter, Assistant Professor of Anatomy*

*James F. Pohilla, Associate Professor of Anatomy*

Symbols, abbreviations, off-campus class locations begin on page 401.



★Anat 0058 **ANATOMY OF THE EXTREMITIES.** No credit. \$46.50 plus \$8 course fee. Total \$54.50.

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, ChRC 208, Pohstilla

Anat 1001 **ANATOMY AND HATHA YOGA.** 4 degree credits, \$62. (♦\$31)

A general survey of anatomy, organized systematically (respiratory system, circulatory system, digestive system, etc.) but structured around understanding the practice of Hatha Yoga. The major kriyas, asanas, and pranayama practices are each considered with the appropriate systems of the body, with emphasis on an internal appreciation of the anatomical and physiological effects and potential benefits of each practice. (Prereq previous or concurrent exposure to Hatha Yoga and one quarter college biology. Not a course in the practice of yoga. Designed for those who desire a scientific discussion of its effects)

Spring Sem Sec 1 T—6:20-9:40, HSUnitA 2-520, Coulter

★Anat 1004 **ELEMENTARY ANATOMY.** 4 degree credits, \$62.

A general survey of human anatomy, including histology, embryology, gross anatomy, and neuroanatomy, with some clinical and physiological correlations. (Prereq 1 quarter of college biology. Limited to 30 students)

Fall Sem Sec 1 T—6:20-9:40, HSUnitA 2-580, 2-585, Coulter

## anthropology (Anth)

(See also General College courses in social and behavioral sciences, and natural science; and Geo 5151, Introduction to Paleontology)

*Christina Harrison, Assistant Professor of Anthropology*

*William L. Rowe, Professor of Anthropology*

*Paul D. Schaefer, Assistant Professor of Anthropology*

*Kenneth W. Smith, Instructor of Anthropology*

### A MAJOR IN ANTHROPOLOGY CAN BE COMPLETED IN THE EVENING.

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

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

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

#### Required Preparatory Courses

1002, 3501, 3502

#### Major Requirements

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

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

Anth 1002 **INTRODUCTION TO ANTHROPOLOGY.** 5 degree credits, \$77.50. (♦\$38.75)(IS)

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—7-9:30, Richfield HS 141

Spring Sem Sec 2 M—6:20-8:50, ForH 55

Sec 3 ★Th—7-9:30, Irondale HS 105, New Brighton

(Limit 40 students)

Symbols, abbreviations, off-campus class locations begin on page 401.

**Anth 1101 INTRODUCTION TO PREHISTORY.** 5 degree credits, \$77.50. (♦\$38.75)



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

**Fall Sem** Sec 1 **M**—6:20-8:50, ForH 55, Harrison

**Anth 1102 INTRODUCTION TO SOCIAL AND CULTURAL ANTHROPOLOGY.** 5 degree credits, \$77.50. (♦\$38.75)



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 **T**—6:20-8:50, ForH 120

Sec 2 **★ W**—7-9:30, Minnetonka HS 120 (Limit 40 students)

**Spring Sem** Sec 3 **Sa**—9 a.m.-11:30, ForH 120

**Anth 3201 METHOD AND THEORY IN CULTURAL AND SOCIAL ANTHROPOLOGY.** 5 degree credits, \$77.50 (♦\$38.75)



Description and explanation in anthropology. Role of theory in defining major problems. Subjective and objective approaches in field work. (Prereq 1002 or 1102 or †)

**Spring Sem** Sec 1 **T**—6:20-8:50, ForH 120

**Anth 5131 ANTHROPOLOGY OF RELIGION AND FOLKLORE.** 5 degree credits, \$85. (♦\$42.50)



Varieties and range of religious beliefs and practices. Relation of religion to other aspects of culture. Comparative analysis of folklore, myth, and oral literature. (Prereq 1102 or 3502 or †. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Sem** Sec 1 **W**—6:20-8:50, ForH 160, Schaefer

**Anth 5141 CULTURE AND PERSONALITY.** 5 degree credits, \$85. (♦\$42.50) (IS)



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

**Fall Sem** Sec 1 **W**—6:20-8:50, ForH 160, Rowe

**Anth 5222 PEOPLES AND CULTURES OF MIDDLE AMERICA.** 5 degree credits, \$85. (♦\$42.50)



Indian-Spanish speaking peoples of Middle America. Processes of acculturation that have produced contemporary cultures of Mexico and Central America. (Prereq 1002 or 1102 or †. May be applied toward the CLA foreign language requirement, Route II for Spanish [see page 359]. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Sem** Sec 1 **Th**—6:20-8:50, ForH 60, Smith

(See also Chicano Studies)

**Anth 5531 OLD WORLD PREHISTORY.** 5 degree credits, \$85. (♦\$42.50)



Archaeological record of human cultural origins and developments in Pleistocene and early recent periods in Africa, Europe, and Asia. (Prereq 1002 or 1101 or †. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Sem** Sec 1 **M**—6:20-8:50, ForH 60, Harrison

## arabic

(See Near and Middle Eastern Studies, page 232)

Symbols, abbreviations, off-campus class locations begin on page 401.

## archaeology

(See Anthropology and Classics)

## architecture (Arch)

(See also Landscape Architecture; Art History)

*Robert E. Dedrich, Lecturer in Architecture and Landscape Architecture*

*Craig Rafferty, Assistant Professor of Architecture*

*Robert Russek, Instructor in Architecture*

*George Winterowd, Professor of Architecture*

*Jeri Zuber, Assistant Professor of Architecture*

### A MAJOR IN ARCHITECTURE CAN BE COMPLETED IN THE EVENING.

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

### B.A. Major Sequence

Required Preparatory Courses

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

### Major Requirements

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

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

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

\*\* These courses do not carry CLA credit.

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

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

### IC 0020 ARCHITECTURE AND MINNESOTA: HISTORICAL CONTEXT, PRESENT FORCES, FUTURE IMAGES. No credit. Allen, Ohlhausen.

(See Informal Courses, page 196).

### Arch 1021 HISTORY OF ENVIRONMENTAL DEVELOPMENT: ARCHITECTURE. 4 degree credits. \$LA 1021. \$62 plus \$4 course fee. Total \$66. (♦\$31 plus \$4 course fee. Total \$35)

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

Fall Qtr Sec 1 T—6:20-8:50, Arch 35

Winter Qtr Sec 2 T—6:20-8:50, Arch 35

### Arch 1022 HISTORY OF ENVIRONMENTAL DEVELOPMENT: LANDSCAPE ARCHITECTURE. 4 degree credits. Tentatively scheduled for 1977-78.

Symbols, abbreviations, off-campus class locations begin on page 401.

**Arch 1023 HISTORY OF ENVIRONMENTAL DEVELOPMENT: PLANNING.** 4 degree credits. Tentatively scheduled for 1977-78.

(See other environmental concerns courses, page 318)

**★Arch 1041-1042-1043 ART FOR ARCHITECTURE STUDENTS.** 2 degree credits each quarter, \$31 each quarter.

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

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

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

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

**★Arch 3081-3082-3083 ARCHITECTURAL DESIGN.** 6 degree credits each quarter, \$93 plus \$10 course fee. Total \$103 each quarter.

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

**Fall Qtr 3081** Sec 1 **MTh**—6:20-8:50, **Sa**—9 a.m.-12, WeH 301

**3082** Sec 2 **MTh**—6:20-8:50, **Sa**—9 a.m.-12, WeH 301

**3083** Sec 3 **MTh**—6:20-8:50, **Sa**—9 a.m.-12, WeH 301

**Winter Qtr 3081** Sec 4 **MTh**—6:20-8:50, **Sa**—9 a.m.-12, WeH 301

**3082** Sec 5 **MTh**—6:20-8:50, **Sa**—9 a.m.-12, WeH 301

**3083** Sec 6 **MTh**—6:20-8:50, **Sa**—9 a.m.-12, WeH 301

**Spring Qtr 3081** Sec 7 **MTh**—6:20-8:50, **Sa**—9 a.m.-12, WeH 301

**3082** Sec 8 **MTh**—6:20-8:50, **Sa**—9 a.m.-12, WeH 301

**3083** Sec 9 **MTh**—6:20-8:50, **Sa**—9 a.m.-12, WeH 301

**★Arch 3091-3092-3093 ARCHITECTURAL DESIGN.** 6 degree credits each quarter, \$93 plus \$10 course fee. Total \$103 each quarter.

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

**Fall Qtr 3091** Sec 1 **MTh**—6:20-8:50, **Sa**—9 a.m.-12, WeH 301

**3092** Sec 2 **MTh**—6:20-8:50, **Sa**—9 a.m.-12, WeH 301

**3093** Sec 3 **MTh**—6:20-8:50, **Sa**—9 a.m.-12, WeH 301

**Winter Qtr 3091** Sec 4 **MTh**—6:20-8:50, **Sa**—9 a.m.-12, WeH 301

**3092** Sec 5 **MTh**—6:20-8:50, **Sa**—9 a.m.-12, WeH 301

**3093** Sec 6 **MTh**—6:20-8:50, **Sa**—9 a.m.-12, WeH 301

**Spring Qtr 3091** Sec 7 **MTh**—6:20-8:50, **Sa**—9 a.m.-12, WeH 301

**3092** Sec 8 **MTh**—6:20-8:50, **Sa**—9 a.m.-12, WeH 301

**3093** Sec 9 **MTh**—6:20-8:50, **Sa**—9 a.m.-12, WeH 301

**★Arch 3061-3062 BUILDING SYSTEMS.** 5 degree credits each quarter, \$77.50 each quarter.

Building systems, subsystems, and components; principles of structural theory; materials and methods used in building; new and developing technologies. (Prereq 3083 for 3061; 3061 for 3062. Limited to 35 students)

**Fall Qtr 3061** Sec 1 **W**—6:20-8:50, Arch 15, Diedrich

**Winter Qtr 3062** Sec 2 **W**—6:20-8:50, Arch 15, Diedrich

**★Arch 3064-3065 ENVIRONMENTAL MANAGEMENT AND CONTROL.** 5 degree credits each quarter. To be offered 1977-78.

Symbols, abbreviations, off-campus class locations begin on page 401.

**Arch 5053 GOTHIC ARCHITECTURE.** 4 degree credits, \$68 plus \$4 course fee. Total \$72. (♦\$34 plus \$4 course fee. Total \$38)

History of development of architecture and urban design in Western Europe from A.D. 1150 until 1400. (Prereq 1021. Qualified students may register for graduate credit at the University of Minnesota)

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

**Arch 5055 ENGLISH AND EARLY AMERICAN ARCHITECTURE.** 4 degree credits, \$68 plus \$4 course fee. Total \$72. (♦\$34 plus \$4 course fee. Total \$38)

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

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

**Arch 5056 MODERN ARCHITECTURE.** 4 degree credits, \$68 plus \$4 course fee. Total \$72. (♦\$34 plus \$4 course fee. Total \$38.)

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)

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

**Arch 5970 DIRECTED STUDY.** Credits arranged. \$17 a credit. Subject matter arranged.

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

## art education (ArEd)

(Department of Curriculum and Instruction)

*Michael Day, Associate Professor and Program Head in Art Education*

*George K. Olson, Assistant Professor of Art Education*

*Robert J. Rice, Instructor in Art Education*

*Anna Smits, Instructor in Art Education*

★**ArEd 3001 SURVEY OF ART ACTIVITIES.** 4 degree credits, \$62.

Introduction to pictorial expression, design, and the function of art in the social environment. **May not be taken S-N.** (No prereq. Limited to 30 students. Not open to art education majors.)

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

★**ArEd 3009 WEAVING WITHOUT A LOOM.** 4 degree credits, \$62.

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

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

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

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

★**ArEd 3010 INTRODUCTION TO WEAVING.** 3 degree credits, \$46.50 plus \$5 course fee. Total \$51.50.

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

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

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

Symbols, abbreviations, off-campus class locations begin on page 401.

**★ArEd 3030 PUPPETRY.** 3 degree credits, \$46.50.

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

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

**★ArEd 5001 ART MEDIA TECHNIQUES.** 3 degree credits this offering (maximum 12 cr) \$51, plus \$2 course fee. Total \$53 each quarter.

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

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

**★ArEd 5001 ART MEDIA TECHNIQUES.** 3 degree credits (maximum 12 cr) \$51 plus \$2 course fee each quarter. Total \$53.50 each quarter.

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

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

## workshops in art education

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

## art history (ArH)

(See also IC 0031, Art and Architecture of the Jewish People)

*Frederick M. Asher, Associate Professor of Art History*

*Frederick Cooper, Associate Professor of Art History*

*William D. Coulson, Assistant Professor of Classics*

*Marion Nelson, Professor of Art History*

*Robert Poor, Associate Professor of Art History*

*Herbert G. Scherer, Assistant Professor and Librarian in Art Library*

*John Steyaert, Assistant Professor of Art History*

*M. Alison Stones, Associate Professor of Art History*

*Michael Stoughton, Assistant Professor of Art History*

*Donald R. Torbert, Professor of Art History*

*Melvin Waldfogel, Professor of Art History*

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

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

Symbols, abbreviations, off-campus class locations begin on page 401.

**B.A. Major Sequence**

**Required Preparatory Courses**

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

**Major Requirements**

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

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

**ArH 1001 INTRODUCTION TO THE VISUAL ARTS.** 4 degree credits, \$3001. \$62 plus \$3 course fee. Total \$65. (♦\$31 plus \$3 course fee. Total \$34.)

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

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

**ArH 1015 ART IN WESTERN CIVILIZATION.** 4 degree credits. \$62 plus \$3 course fee. Total \$65. (♦\$31 plus \$3 course fee. Total \$34)(IS)

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

**Spring Sem** Sec 1 M—6:20-8, Arch 25, Waldfogel

**\*ArH 1016 INTRODUCTION TO ASIAN ART.** 4 degree credits, \$62 plus \$3 course fee. Total \$65. (♦\$31 plus \$3 course fee. Total \$34)

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

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

**\*ArH 1017 THE WESTERN TRADITION.** 4 degree credits, \$62 plus \$3 course fee. Total \$65.

Contrasts of Far Eastern, Islamic, and primitive cultural traditions to those of the Western world. (No prereq. Limited to 60 students.)

**Fall Qtr** Sec 1 Th—6:30-9, Mpls Institute of Arts, room 211, 2400 S  
3 Ave, Scherer (will utilize collections and galleries)

**new**

**ArH 3001 INTRODUCTION TO THE VISUAL ARTS.** 4 degree credits, \$1001. \$62 plus \$3 course fee. Total \$65.

See course description for ArH 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, Arch 25, Torbert  
**Spring Qtr** Sec 3 T—6:20-8:50, Arch 25, Torbert

**ArH 3008 HISTORY OF ANCIENT ART.** 4 degree credits, \$1008. \$62 plus \$3 course fee. Total \$65. (♦\$31 plus \$3 course fee. Total \$34.)

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 Th—6:20-8:50, Jones 207B, Asher

Symbols, abbreviations, off-campus class locations begin on page 401.

**Arth 3009 HISTORY OF MEDIEVAL ART.** 4 degree credits, \$62 plus \$3 course fee. Total \$65. (♦\$31 plus \$3 course fee. Total \$34)

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

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

**★Arth 3011 HISTORY OF RENAISSANCE AND BAROQUE ART.** 4 degree credits, \$62 plus \$3 course fee. Total \$65. (♦\$31 plus \$3 course fee. Total \$34)

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


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

**Arth 3012 HISTORY OF 19TH-AND 20TH-CENTURY ART.** 4 degree credits, \$62. (♦\$31)

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

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

**Arth 3162 ROMAN ART AND ARCHAEOLOGY.** 5 degree credits, \$Clas 3162. \$77.50 plus \$3 course fee. Total \$80.50. (♦\$38.75 plus \$3 course fee. Total \$41.75)

 Roman art and material culture: how it came into being; examination of the degree of change, of continuity, of "progress" or "decay" in the later Empire. Meets concurrently with Clas 3162. (Prereq 3008 or 3152)

Winter Qtr Sec 1 W—6-8:30, Folwell 209, Coulson

**Arth 3303 BAROQUE AND ROCOCO PAINTING IN FRANCE.** 4 degree credits, \$62 plus \$3 course fee. Total \$65. (♦\$31 plus \$3 course fee. Total \$34)

◆ French painting of the 17th and first half of the 18th centuries. (No prereq)

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

**Arth 3465 MASTER PAINTERS OF THE NINETEENTH CENTURY.** 4 degree credits, \$62 plus \$3 course fee. Total \$65. (♦\$31 plus \$3 course fee. Total \$34)

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


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

**Arth 3467 MODERN ART.** 4 degree credits, \$62 plus \$3 course fee. Total \$65. (♦\$31 plus \$3 course fee. Total \$34)

◆ 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)

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

**Arth 3576 ARCHITECTURE IN MINNESOTA.** 4 degree credits, \$62 plus \$3 course fee. Total \$65. (♦\$31 plus \$3 course fee. Total \$34)

 Minnesota architecture in terms of the styles, influences and characteristics found in Minnesota buildings between ca. 1820 and the present day. (No prereq)


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

**Arth 5324 15TH CENTURY PAINTING IN NORTHERN EUROPE.** 5 degree credits, \$85 plus \$3 course fee. Total \$88. (♦\$42.50 plus \$3 course fee. Total \$45.50)

◆ Painting in the Netherlands, France and Germany during the late Gothic period; its influence. (Prereq 3009 or 3011, grad or †. Qualified students may register for graduate credit at the University of Minnesota)

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

**Arth 5358 18TH-CENTURY ART IN ITALY, GERMANY, AUSTRIA.** 4 degree credits, \$68 plus \$3 course fee. Total \$71. (♦\$34 plus \$3 course fee. Total \$37)

 Italian painting, sculpture, and architecture; German and Austrian architecture. (Prereq 3011, grad or †. Qualified students may register for graduate credit at the University of Minnesota.)

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



**ARTH 5521 20TH-CENTURY ART IN THE UNITED STATES.** 4 degree credits, \$68 plus \$3 course fee. Total \$71. (◆\$34 plus \$3 course fee. Total \$37)

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

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

**ARTH 5645 FOLK ARTS OF SCANDINAVIA.** 4 degree credits, \$68 plus \$3 course fee. Total \$71. (◆\$34 plus \$3 course fee. Total \$37)

Wood carving, metalwork, decorative painting, weaving, stitchery, and domestic architecture of rural Scandinavia; origins in pagan and medieval art. (Prereq 4 cr art history or 3. May be applied toward the CLA foreign language requirement, Route II [see page 359]. Qualified students may register for graduate credit at the University of Minnesota)

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

**ARTH 5765 EARLY CHINESE ART.** 5 degree credits, \$85 plus \$3 course fee. Total \$88. (◆\$42.50 plus \$3 course fee. Total \$45.50)

Ancient ceramics and ritual bronzes, early Buddhist sculpture, and early Chinese painting. (Prereq 4 cr art history or 3. May be applied toward the CLA foreign language requirement, Route II [see page 359]. Qualified students may register for graduate credit at the University of Minnesota.)

Fall Qtr Sec 1 Th—6:20-8:50, Jones 207A, Poor

**ARTH 5767 JAPANESE PAINTING.** 4 degree credits, \$68 plus \$3 course fee. Total \$71. (◆\$34 plus \$3 course fee. Total \$37)

Japanese pictorial arts from earliest to modern times; works that best exemplify development of indigenous traditions. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 359]. Qualified students may register for graduate credit at the University of Minnesota.)

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

## artistic expression

(See General College)

## art statewide

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

## arts, studio (Arts)

(See also General College courses in artistic expression; IC 0024, The Artist's Hat; WoSt 3502, Women in the Arts; and Phil 3502, Introduction to Aesthetics)

*Mary Abbott, Instructor in Art*

*Guy Baldwin, Assistant Professor of Art*

*Karl Bethke, Associate Professor of Art*

*Linda Brooks, Assistant Professor of Art*

*Ralph Brown, Lecturer in Art*

Symbols, abbreviations, off-campus class locations begin on page 401.

*Peter Busa, Professor of Art*  
*Victor Caglioti, Assistant Professor of Art*  
*Thomas Cowette, Assistant Professor of Art*  
*Allen Downs, Professor of Art*  
*David L. Feinberg, Assistant Professor of Art*  
*Raymond Hendler, Professor of Art*  
*James Henkel, Assistant Professor of Art*  
*Curtis Hoard, Associate Professor of Art*  
*David Husom, Lecturer in Art*  
*Donald Jardine, Lecturer in Art*  
*Henning Jensen, Lecturer in Art*  
*David Johnson, Lecturer in Art*  
*Glenna Johnson, Lecturer in Art*  
*Frederick Klein, Lecturer in Art*  
*Susan Lucey, Lecturer in Art*  
*Malcolm Myers, Professor of Art*  
*Katherine Nash, Professor of Art*  
*Zigmunds Priede, Professor of Art*  
*Eleanor Quirt, Lecturer in Art*  
*Judith Roode, Lecturer in Art*  
*William Roode, Assistant Professor of Art*  
*Thomas Rose, Assistant Professor of Art*  
*Herman Rowan, Professor of Art*  
*Herman Somberg, Associate Professor of Art*  
*James Smith, Lecturer in Art*  
*Sharon Stockwell, Lecturer in Art*  
*Harry C. Webb, Lecturer in Photography*

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

**NOTE:** Students who find sections closed should examine the possibility of another course which may serve the same purpose. 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 coordinator of undergraduate advising of the department; telephone 376-3219.

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

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

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

In addition, an ArtS counselor will be available two nights a week.

#### **B.A. Major Sequence**

Required Preparatory Courses:

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

Symbols, abbreviations, off-campus class locations begin on page 401.

**Major Requirements**

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

**B.F.A. Major Sequence**

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

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

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

**Required Preparatory Courses:**

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

**Major Requirements**

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

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

**RESTRICTIONS IN STUDIO ARTS CLASSES**

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

**Arts 1401 INTRODUCTION TO STUDIO ART. See page 84.**

**\*Arts 0001C COLOR PHOTOGRAPHY I.** 3 certificate credits, \$46.50 plus \$10 special fee.  
Total \$56.50.

A foundation course in the growing field of color photography, designed to provide the student with practical knowledge and experience in basic color work. Course includes: (a) lecture demonstrations of equipment, color processes, and techniques; and (b) supervised camera assignments in the studio and on outdoor field trips. Student must have camera. (No prereq. Limited to 30 students. See **Restrictions**, page 81)

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

**\*Arts 0002C COLOR PHOTOGRAPHY II.** 3 certificate credits, \$46.50 plus \$10 special fee.  
Total \$56.50.

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. Student must have camera. (Prereq 0001C or  $\frac{1}{2}$ . Limited to 30 students. See **Restrictions**, page 81)

**Spring Sem** Sec 1 T—8:15-9:55, AgEng 102, StP Campus, Webb

(See also photography courses in physics and journalism)

**Symbols, abbreviations, off-campus class locations begin on page 401.**

ArtS 0003C home design course is now in the College of Home Economics Interior Design Program. See Dsgn 1400C.

★ArtS 0240C **COMMERCIAL ILLUSTRATION II.** 4 certificate credits each quarter (maximum 12 cr). \$62 plus \$5 course fee. Total \$67 each quarter.

Further development of illustration skills with encouragement of individual directions, i.e. soft line/hard line illustration, fashion illustration, cartooning, portraiture, story, industrial packaging, etc. (Prereq 3231 or \$. Limited to 25 students. See **Restrictions**, page 81)

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

★ArtS 0260C **ADVERTISING DESIGN III.** 4 certificate credits each quarter (maximum 12 cr). \$62 plus \$5 course fee. Total \$67 each quarter.

Continued development of lay-out skills with emphasis on creative approaches to individual projects and ideas. Exposure to actual working conditions. Advertising psychology, consumer relations and business management. Orientation in agency, studio and corporation procedures. (Prereq 3252 or \$. Limited to 25 students. See **Restrictions**, page 81)

Spring Qtr Sec 1 M—6-9:45, ArtB 160, Jensen

★ArtS 0280C **PORTFOLIO AND VISUAL PRESENTATION TECHNIQUES.** 4 certificate credits each quarter (maximum 12 cr). \$62 each quarter.

Compilation and refinement of individual portfolios under the guidance of the instructor. Intermittent individual and group critiques. Preparation of slides, preparation cards, project on materials, etc., for a variety of presentation purposes. (Prereq 24 cr of 32XX courses. Limited to 25 students. See **Restrictions**, page 81)

Fall Qtr Sec 1 M—6-9:45, BlegH 105, Jensen

(See also 3-level commercial art courses; and GC 1051, Commercial Art for Non-Professionals)

★ArtS 1101 **BASIC DRAWING.** 4 degree credits, \$62 plus \$5 course fee. Total \$67.

An introduction to studio work; exploration of contemporary and traditional methods. Work from nature, various drawing and painting mediums. (No prereq. Limited to 25 students. See **Restrictions**, page 81)

Fall Qtr Sec 1 M—6-9:45, ArtB 161

Sec 2 M—6-9:45, Richfield HS S-4, Quirt

Sec 3 M—6-9:45, ArtB 150, Somberg

Sec 4 T—6-9:45, ArtB 140, Caglioti

Sec 5 T—6-9:45, ArtB 160, Feinberg

Sec 6 W—6-9:45, ArtB 140, Priede

Sec 7 Th—6-9:45, ArtB 160, Caglioti

Sec 8 Sa—8:30 a.m.-12:15, ArtB 151, Rowan

Winter Qtr Sec 9 M—6-9:45, ArtB 150, Somberg

Sec 10 M—6-9:45, Sandburg JHS 118, Golden Valley, Quirt

Sec 11 T—6-9:45, ArtB 140, Caglioti

Sec 12 W—6-9:45, ArtB 160, Caglioti

Sec 13 W—6-9:45, ArtB 140, Priede

Sec 14 Sa—8:30 a.m.-12:15, ArtB 151, Rowan

Spring Qtr Sec 15 M—6-9:45, Kellogg HS 200, Quirt

Sec 16 M—6-9:45, ArtB 150, Somberg

Sec 17 M—6-9:45, ArtB 161, Brown

Sec 18 T—6-9:45, ArtB 160, Feinberg

Sec 19 W—6-9:45, ArtB 140, Priede

Sec 20 Sa—8:30 a.m.-12:15, ArtB 151, Rowan

★ArtS 1102 **DRAWING.** 4 degree credits, \$62 plus \$5 course fee. Total \$67.

Work from life and nature. Introduction to color and pictorial structure. (Prereq 1101. Limited to 25 students. See **Restrictions**, page 81)

Symbols, abbreviations, off-campus class locations begin on page 401.

<b>Fall Qtr</b>	Sec 1	<b>M</b> —6-9:45, ArtB 140, Rowan
	Sec 2	<b>W</b> —6-9:45, ArtB 160
<b>Winter Qtr</b>	Sec 3	<b>M</b> —6-9:45, ArtB 140, Rowan
	Sec 4	<b>W</b> —6-9:45, ArtB 150, Somberg
<b>Spring Qtr</b>	Sec 5	<b>M</b> —6-9:45, ArtB 140, Rowan
	Sec 6	<b>W</b> —6-9:45, ArtB 160, Caglioti

★**Arts 1104 COLOR.** 4 degree credits, \$62 plus \$5 course fee. Total \$67.

Introduction to color and pictorial organization. This will provide students with training in basic techniques preparatory to advanced courses in painting and printmaking. (Prereq 1101. Limited to 25 students. See **Restrictions**, page 81)

<b>Fall Qtr</b>	Sec 1	<b>T</b> —6-9:45, ArtB 161, Abbott
	Sec 2	<b>Th</b> —6-9:45, ArtB 141, Bethke
<b>Winter Qtr</b>	Sec 3	<b>T</b> —6-9:45, ArtB 161, Abbott
	Sec 4	<b>Th</b> —6-9:45, ArtB 141, Bethke
<b>Spring Qtr</b>	Sec 5	<b>T</b> —6-9:45, ArtB 161, Abbott
	Sec 6	<b>Th</b> —6-9:45, ArtB 141, Bethke

★**Arts 1105 BEGINNING PAINTING.** 4 degree credits, \$62 plus \$5 course fee. Total \$67.

Introductory course to painting medium. Studio work in various media from nature, still life, and other sources. Emphasis on individual expression and development. (Prereq 1104. Limited to 25 students. See **Restrictions**, page 81)

<b>Fall Qtr</b>	Sec 1	<b>M</b> —6-9:45, ArtB 151, Hendler
<b>Winter Qtr</b>	Sec 2	<b>M</b> —6-9:45, ArtB 151, Hendler
<b>Spring Qtr</b>	Sec 3	<b>M</b> —6-9:45, ArtB 151, Hendler

★**Arts 1201 INTRODUCTION TO COMMERCIAL ART.** 4 degree credits, \$62.

Scope of the field of commercial art, history and contemporary practices. Function of agencies, studios and corporations. Marketing, print and broadcast. Relationship to the business community and the consumer. Materials and terminology. Lectures, audio visual material. Approximately half the course time is spent on field trips. (No prereq. Limited to 30 students. See **Restrictions**, page 81)

<b>Fall Qtr</b>	Sec 1	<b>T</b> —6-8, AudCB 125, Klein
	Sec 2	<b>W</b> —6-8, AudCB 125, Klein
<b>Winter Qtr</b>	Sec 3	<b>T</b> —6-8, AudCB 125, Klein
	Sec 4	<b>W</b> —6-8, AudCB 125, Klein
<b>Spring Qtr</b>	Sec 5	<b>W</b> —6-8, AudCB 125, Klein

Your attention is called to the Commercial Art Certificate, page 377.

★**Arts 1301 BASIC SCULPTURE.** 4 degree credits, \$62 plus \$20 course fee. Total \$82.

Beginning course. Intensive study of structure with emphasis on form and space. Construction in metal and plaster. (No prereq. Limited to 25 students. See **Restrictions**, page 81)

<b>Fall Qtr</b>	Sec 1	<b>T</b> —6-9:45, ArtB 90, Lucey
<b>Winter Qtr</b>	Sec 2	<b>W</b> —6-9:45, ArtB 90, Baldwin
<b>Spring Qtr</b>	Sec 3	<b>T</b> —6-9:45, ArtB 90, Lucey
	Sec 4	<b>Th</b> —6-9:45, ArtB 90, Nash

★**Arts 1302 BASIC SCULPTURE.** 4 degree credits, \$62 plus \$20 course fee. Total \$82.

Natural form is studied. Imaginative approaches are encouraged. Construction in clay, plaster, wood. Mold-making and casting. (No prereq. Limited to 25 students. See **Restrictions**, page 81)

<b>Fall Qtr</b>	Sec 1	<b>T</b> —6-9:45, ArtB 50, Baldwin
	Sec 2	<b>W</b> —6-9:45, ArtB 50, Rose
<b>Winter Qtr</b>	Sec 3	<b>W</b> —6-9:45, ArtB 50, Lucey
<b>Spring Qtr</b>	Sec 4	<b>W</b> —6-9:45, ArtB 50, Rose

Symbols, abbreviations, off-campus class locations begin on page 401.

**Arts 1401 INTRODUCTION TO STUDIO ART.** 4 degree credits, \$62. (◆\$31)

Introduces the student to the concerns, media, and environment of the practicing artist, and to the concepts of visual art making in its contemporary and historical context. Lectures, demonstrations, and discussions provide a broad aesthetic foundation for entering beginning Arts courses, and a thorough understanding of the creative process, visual expression, and aesthetic criteria. (No prereq)

**Fall Qtr** Sec 1 Th—6-8:30, AudCB 125, Hendler  
**Winter Qtr** Sec 2 Th—6-8:30, AudCB 125, Hendler  
**Spring Qtr** Sec 3 Th—6-8:30, AudCB 125, Hendler

**★Arts 1510 INTAGLIO.** 4 degree credits each quarter (maximum 8 credits). \$62 plus \$15 course fee. Total \$77 each quarter.

Introduction to various techniques of etching and engraving employed in working on metal plates, as well as collagraphic techniques in creative context. (No prereq. Meets concurrently with 3510, 5510. Limited to 25 students. See **Restrictions**, page 81)

**Fall Qtr** Sec 1 T—6-9:45, ArtB 170, Bethke  
**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 each quarter (maximum 8 cr). \$62 plus \$15 course fee. Total \$77 each quarter.

An introduction to planographic printing from stones and plates. Emphasis is directed to the basic techniques of drawing, processing, printing and presentation of prints. Class periods are devoted to lecture, demonstrations and critiques. Some reading and attending of art exhibitions is expected. (No prereq. Meets concurrently with 3520, 5520. Limited to 20 students. See **Restrictions**, page 81)

**Spring Qtr** Sec 1 Sa—1:30-4:15, ArtB 176, Priede

(See also related journalism courses)

**★Arts 1701 INTRODUCTION TO PHOTO MEDIUM.** 4 degree credits, \$62 plus \$15 course fee. Total \$77.

A course in black and white photography for beginners with little or no experience. Lectures on contemporary and historical use of photography. The course will cover techniques in the use of the camera, film development and enlargements. Emphasis on the creative process. Student must have camera. (No prereq. Limited to 20 students. See **Restrictions**, page 81)

**Fall Qtr** Sec 1 T—6-9:45, ArtB 131, Henkel  
Sec 2 T—6-9:45, MacP Bsmt, Husom  
Sec 3 Th—6-9:45, ArtB 131, Stockwell  
Sec 4 Th—6-9:45, MacP Bsmt, Husom  
**Winter Qtr** Sec 5 T—6-9:45, ArtB 131, Henkel  
Sec 6 T—6-9:45, MacP Bsmt, Husom  
Sec 7 Th—6-9:45, ArtB 131, Stockwell  
Sec 8 Th—6-9:45, MacP Bsmt, Husom  
**Spring Qtr** Sec 9 T—6-9:45, ArtB 131, Henkel  
Sec 10 T—6-9:45, MacP Bsmt, Husom  
Sec 11 Th—6-9:45, ArtB 131, Stockwell  
Sec 12 Th—6-9:45, MacP Bsmt, Husom

(See also photography courses in physics and journalism)

**★Arts 1702 PHOTOGRAPHIC NON-SILVER PROCESSES.** 4 degree credits, \$62 plus \$15 course fee. Total \$77.

Will explore photographic non-silver processes. For students with some previous experience with photographic equipment and techniques. Course will include lectures and labs with emphasis on individual projects and instruction. (Prereq 1701 or ♯. Limited to 20 students. See **Restrictions**, page 81)

**Fall Qtr** Sec 1 Sa—8:30 a.m.-12:15, ArtB 131, Husom  
**Winter Qtr** Sec 2 Sa—8:30 a.m.-12:15, ArtB 131, Husom  
**Spring Qtr** Sec 3 Sa—8:30 a.m.-12:15, ArtB 131, Husom

**Symbols, abbreviations, off-campus class locations begin on page 401.**

★**ArtS 1801 CERAMIC PROCESSES.** 4 degree credits, \$62 plus \$20 course fee. Total \$82.

Clay work by hand and forming on potter's wheel. Ceramics as creative expression. Technical considerations of clays, glazes and kilns. Pottery and sculptural approaches. (No prereq. Limited to 24 students. See **Restrictions**, page 81)

<b>Fall Qtr</b>	Sec 1	<b>M</b> —6-9:45, ArtB 10, Krett
	Sec 2	<b>T</b> —6-9:45, ArtB 10, Diduk
	Sec 3	<b>W</b> —6-9:45, ArtB 10, Ostwald
<b>Winter Qtr</b>	Sec 4	<b>M</b> —6-9:45, ArtB 10, Krett
	Sec 5	<b>T</b> —6-9:45, ArtB 10, Diduk
	Sec 6	<b>W</b> —6-9:45, ArtB 10, Ostwald
<b>Spring Qtr</b>	Sec 7	<b>M</b> —6-9:45, ArtB 10, Krett
	Sec 8	<b>T</b> —6-9:45, ArtB 10, Diduk
	Sec 9	<b>W</b> —6-9:45, ArtB 10, Ostwald

★**ArtS 3110 DRAWING.** 4 degree credits each quarter (maximum 12 cr). \$62 plus \$10 course fee. Total \$72 each quarter.

Portraiture and life drawing from the model, still life, and nature. Principles of anatomy. (Prereq 1102. Limited to 25 students. See **Restrictions**, page 81)

<b>Fall Qtr</b>	Sec 1	<b>M</b> —6-9:45, ArtB 160, J Roode
	Sec 2	<b>W</b> —6-9:45, ArtB 141, Abbott
<b>Winter Qtr</b>	Sec 3	<b>M</b> —6-9:45, ArtB 160, J Roode
	Sec 4	<b>W</b> —6-9:45, ArtB 141, Abbott
<b>Spring Qtr</b>	Sec 5	<b>W</b> —6-9:45, ArtB 141, Abbott
	Sec 6	<b>W</b> —6-9:45, ArtB 161, J Roode

★**ArtS 3120 PAINTING.** 4 degree credits each quarter (maximum 12 cr). \$62 plus \$10 course fee. Total \$72 each quarter.

Introduction to media and problems in painting. Individual projects and instruction. (Prereq 1105 and 8 cr of 3110 or \$. Meets concurrently with 3150. Limited to 25 students. See **Restrictions**, page 81)

<b>Fall Qtr</b>	Sec 1	<b>W</b> —6-9:45, ArtB 151, Feinberg
	Sec 2	<b>Th</b> —6-9:45, ArtB 161, Roode
<b>Winter Qtr</b>	Sec 3	<b>W</b> —6-9:45, ArtB 151, Feinberg
	Sec 4	<b>Th</b> —6-9:45, ArtB 161, Roode
<b>Spring Qtr</b>	Sec 5	<b>W</b> —6-9:45, ArtB 151, Feinberg
	Sec 6	<b>Th</b> —6-9:45, ArtB 161, Roode

ArtS 3135 and 3136 housing courses are now in the College of Home Economics Interior Design Program. (See Dsgn 3467 and 3463)

★**ArtS 3150 PAINTING.** 4 degree credits each quarter (maximum 12 cr). \$62 plus \$5 course fee. Total \$67 each quarter.

Oil and acrylic painting. (Prereq 1101 or \$. Not open to ArtS majors. Meets concurrently with 3120. Limited to 25 students. See **Restrictions**, page 81)

<b>Fall Qtr</b>	Sec 1	<b>W</b> —6-9:45, ArtB 151, Feinberg
	Sec 2	<b>Th</b> —6-9:45, ArtB 161, Roode
<b>Winter Qtr</b>	Sec 3	<b>W</b> —6-9:45, ArtB 151, Feinberg
	Sec 4	<b>Th</b> —6-9:45, ArtB 161, Roode
<b>Spring Qtr</b>	Sec 5	<b>W</b> —6-9:45, ArtB 151, Feinberg
	Sec 6	<b>Th</b> —6-9:45, ArtB 161, Roode

★**ArtS 3160 WATERCOLOR.** 4 degree credits each quarter (maximum 12 cr). \$62 plus \$5 course fee. Total \$67 each quarter.

Introduction to transparent watercolor, gouache, casein, and tempera. General course introducing the student to a variety of drawing and painting mediums. Figure, still life, landscape, and abstract design. (Prereq 1101, 1104 and \$. Meets concurrently with 5160. Limited to 15 students. See **Restrictions**, page 81)

<b>Fall Qtr</b>	Sec 1	<b>M</b> —6-9:45, ArtB 141, D Johnson
	Sec 2	<b>Sa</b> —8:30 a.m.-12:15, ArtB 161, Brown

Symbols, abbreviations, off-campus class locations begin on page 401.

<b>Winter Qtr</b>	Sec 3	<b>M</b> —6-9:45, ArtB 141, Myers
	Sec 4	<b>Sa</b> —8:30 a.m.-12:15, ArtB 161, Brown
<b>Spring Qtr</b>	Sec 5	<b>M</b> —6-9:45, ArtB 141, Myers
	Sec 6	<b>Sa</b> —8:30 a.m.-12:15, ArtB 161, Brown

**★Arts 3202 COMMERCIAL DRAWING I.** 4 degree credits, \$62 plus \$5 course fee. Total \$67.

Contemporary drawing techniques; emphasis on the study of visual relationships in objects and the figure and their application to studio practice. Two-dimensional drawing media. Not applicable to studio arts major requirements. (Prereq 1104 or §. Limited to 25 students. See **Restrictions**, page 81)

<b>Fall Qtr</b>	Sec 1	<b>T</b> —6-9:45, ArtB 141, Jardine
<b>Winter Qtr</b>	Sec 2	<b>T</b> —6-9:45, ArtB 141, Jardine
<b>Spring Qtr</b>	Sec 3	<b>T</b> —6-9:45, ArtB 141, Jardine

**★Arts 3203 COMMERCIAL DRAWING II.** (old 3115). 4 degree credits, \$62 plus 5 course fee. Total \$67.

Extensive practice with emphasis on development of visual and technical skills. Transparent and opaque washes; ink line, dry brush, etc. Not applicable to studio arts major requirements. (Prereq 3202 or §. Limited to 25 students. See **Restrictions**, page 81)

<b>Fall Qtr</b>	Sec 1	<b>Th</b> —6-9:45, ArtB 140, Jensen
<b>Winter Qtr</b>	Sec 2	<b>Th</b> —6-9:45, ArtB 140, Smith

(Your attention is called to the Commercial Art Certificate, page xx)

**★Arts 3220 COMMERCIAL ART MEDIA AND STUDIO TECHNIQUES.** 4 degree credits each quarter. (maximum 8 cr). \$62 plus \$5 course fee. Total \$67 each quarter.

Art Techniques, color systems and processes, keyline and production communication; elements of typography, lettering and calligraphy. Principles of reproduction processes and materials in relationship to the visual statement. Material supported by field trips. Not applicable to studio arts major requirements. (Prereq 3202 or §. Limited to 25 students. See **Restrictions**, page 81)

<b>Winter Qtr</b>	Sec 1	<b>Th</b> —6-9:45, ArtB 160, Jensen
<b>Spring Qtr</b>	Sec 2	<b>Th</b> —6-9:45, ArtB 160, Jensen

**★Arts 3231 COMMERCIAL ILLUSTRATION I.** 4 degree credits, \$62 plus \$5 course fee. Total \$67.

Projects in various media involving all advertising subject matter. Advertising and story illustration with emphasis on current trends. Not applicable to studio arts major requirements. (Prereq 3220 and 4 cr of 3110 or §. Limited to 25 students. See **Restrictions**, page 81)

<b>Fall Qtr</b>	Sec 1	<b>Th</b> —6-9:45, ArtB 150, Smith
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**★Arts 3251 ADVERTISING DESIGN I.** 4 degree credits, \$62 plus \$5 course fee. Total \$67.

Lay-out techniques, materials and structure. Application of type style and copy fitting. Not applicable to studio arts major requirements. (Prereq 8 cr of 3220 or §. Limited to 25 students. See **Restrictions**, page 81)

<b>Fall Qtr</b>	Sec 1	<b>T</b> —6-9:45, ArtB 150, Jensen
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**★Arts 3252 ADVERTISING DESIGN II.** 4 degree credits, \$62 plus \$5 course fee. Total \$67.

Continued development of lay-out skills. Basic advertising psychology; typography, photographic techniques, color separation, printing and production techniques. Art directing photography and art. Not applicable to studio arts major requirements. (Prereq 3251 or §. Limited to 25 students. See **Restrictions**, page 81)

<b>Winter Qtr</b>	Sec 1	<b>T</b> —6-9:45, ArtB 150, Jensen
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**★Arts 3301 DIRECT METAL SCULPTURE.** 4 degree credits, \$62 plus \$20 course fee. Total \$82.

Welding and brazing. (Prereq 1301, 1302. Meets concurrently with 5310. Limited to 15 students. See **Restrictions**, page 81)

<b>Fall Qtr</b>	Sec 1	<b>Th</b> —6-9:45, ArtB 90, Nash
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Symbols, abbreviations, off-campus class locations begin on page 401.



★**ArtS 3302 PLASTICS MEDIA: WOOD, STONE CARVING.** 4 degree credits, \$62 plus \$20 course fee. Total \$82.

See course description for 1302. (Prereq 1301, 1302. Meets concurrently with 5320. Limited to 15 students. See **Restrictions**, page 81)

**Winter Qtr** Sec 1 T—6-9:45, ArtB 35, Rose

★**ArtS 3304 CONSTRUCTIONS, KINETICS, ELECTRONIC SCULPTURE.** 4 degree credits, \$62 plus \$20 course fee. Total \$82.

Kinetics and mechanics. (Prereq 1301, 1302. Meets concurrently with 5340. Limited to 15 students. See **Restrictions**, page 81)

**Spring Qtr** Sec 1 W—6-9:45, ArtB 80, Baldwin

★**ArtS 3510 INTAGLIO.** 4 degree credits each quarter (maximum of 12 cr). \$62 plus \$15 course fee. Total \$77 each quarter.

A print class for students who have had experience in drawing composition. All techniques of fine printing will be taught and color printing will be demonstrated in engraving and etching. (Prereq 4 cr of 1510 or \*. Meets concurrently with 1510, 5510. Limited to 25 students. See **Restrictions**, page 81)

**Fall Qtr** Sec 1 T—6-9:45, ArtB 170, Bethke

**Winter Qtr** Sec 2 T—6-9:45, ArtB 170, Myers

**Spring Qtr** Sec 3 T—6-9:45, ArtB 170, Myers

★**ArtS 3520 INTERMEDIATE LITHOGRAPHY.** 4 degree credits each quarter (maximum 12 cr). \$62 plus \$15 course fee. Total \$77 each quarter.

Further exploration of fundamental techniques with introduction to color printing. Emphasis is directed to a more independent approach, stressing artistic considerations, in terms of materials and the visual manifestation of a statement. (Prereq 4 cr of 1520 or \*. Meets concurrently with 1520, 5520. Limited to 20 students. See **Restrictions**, page 81)

**Spring Qtr** Sec 1 Sa—1:30-4:15, ArtB 176, Priede

★**ArtS 3701 INTRODUCTION TO ART OF FILMMAKING.** 4 degree credits, \$62 plus \$25 course fee. Total \$87.

Lectures and practical aspects of making films. Production limited to descriptive and experimental work. (No prereq. Meets concurrently with 3720. Limited to 20 students. See **Restrictions**, page 81)

**Fall Qtr** Sec 1 M—6-9:45, ArtB 120, G Johnson

Sec 2 T—6-9:45, ArtB 120, G Johnson

**Winter Qtr** Sec 3 M—6-9:45, ArtB 120, G Johnson

Sec 4 T—6-9:45, ArtB 120, G Johnson

**Spring Qtr** Sec 5 M—6-9:45, ArtB 120, G Johnson

Sec 6 T—6-9:45, ArtB 120, G Johnson

(See other film courses, page 291)

★**ArtS 3710 INTERMEDIATE PHOTOGRAPHY.** 4 degree credits each quarter (maximum 12 cr). \$62 plus \$15 course fee. Total \$77 each quarter.

Continued work in photographic controls and processes. Introduction to related photosensitive media. Emphasis on creative process with attention to individual interests and requirements. (Prereq 1701 or \*. Meets concurrently with 5710. Limited to 15 students. See **Restrictions**, page 81)

**Fall Qtr** Sec 1 M—6-9:45, ArtB 131, Downs

Sec 2 W—6-9:45, ArtB 131, Brooks

**Winter Qtr** Sec 3 M—6-9:45, ArtB 131, Downs

Sec 4 W—6-9:45, ArtB 131, Brooks

**Spring Qtr** Sec 5 M—6-9:45, ArtB 131, Downs

Sec 6 W—6-9:45, ArtB 131, Brooks

Symbols, abbreviations, off-campus class locations begin on page 401.

★**ArtS 3720 FILM WORKSHOP.** 4 degree credits each quarter (maximum 12 cr). \$62 plus \$25 course fee. Total \$87 each quarter.

Practical study of motion picture on an art form. Production limited to descriptive and experimental work. (Prereq †. Meets concurrently with 3701. Limited to 20 students. See **Restrictions**, page 81)

<b>Fall Qtr</b>	Sec 1	<b>M</b> —6-9:45, ArtB 120, G Johnson
	Sec 2	<b>T</b> —6-9:45, ArtB 120, G Johnson
<b>Winter Qtr</b>	Sec 3	<b>M</b> —6-9:45, ArtB 120, G Johnson
	Sec 4	<b>T</b> —6-9:45, ArtB 120, G Johnson
<b>Spring Qtr</b>	Sec 5	<b>M</b> —6-9:45, ArtB 120, G Johnson
	Sec 6	<b>T</b> —6-9:45, ArtB 120, G Johnson

(See other film courses, page 291)

★**ArtS 3810 CERAMIC DESIGN.** 4 degree credits each quarter (maximum 12 cr). \$62 plus \$25 course fee. Total \$87 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 †. Limited to 20 students. See **Restrictions**, page 81)

<b>Fall Qtr</b>	Sec 1	<b>T</b> —6-9:45, HolB 137, Hoard
<b>Winter Qtr</b>	Sec 2	<b>T</b> —6-9:45, HolB 137, Hoard
<b>Spring Qtr</b>	Sec 3	<b>T</b> —6-9:45, HolB 137, Hoard

★**ArtS 5110 ADVANCED DRAWING.** 4 degree credits each quarter (maximum 16 cr). \$68 plus \$10 course fee. Total \$78 each quarter.

Primarily for painting majors. Drawing in all mediums from life and from imagination; history of drawing. (Prereq 12 cr of 3110 or †. Limited to 20 students. See **Restrictions**, page 81. Qualified students may register for graduate credit at the University of Minnesota)

<b>Fall Qtr</b>	Sec 1	<b>W</b> —6-9:45, ArtB 150, Somberg
<b>Spring Qtr</b>	Sec 2	<b>W</b> —6-9:45, ArtB 150, Somberg

★**ArtS 5120 PROBLEMS IN PAINTING.** 4 degree credits each quarter (maximum 16 cr). \$68 plus \$10 course fee. Total \$78 each quarter.

An advanced course in oil and acrylic painting with emphasis on color theories as they apply to current trends in art. (Prereq 12 cr of 3120 or †. Limited to 25 students. See **Restrictions**, page 81. Qualified students may register for graduate credit at the University of Minnesota)

<b>Fall Qtr</b>	Sec 1	<b>W</b> —6-9:45, ArtB 161, Caglioti
<b>Spring Qtr</b>	Sec 2	<b>T</b> —6-9:45, ArtB 151, Caglioti

★**ArtS 5160 WATERCOLOR.** 4 degree credits each quarter (maximum 16 cr). \$68 plus \$5 course fee. Total \$73 each quarter.

Advanced watercolor techniques, aesthetic directions. Individual concepts and development of sensibilities. (Prereq 12 cr of 3160 or †. Meets concurrently with 3160. Limited to 10 students. See **Restrictions**, page 81. Qualified students may register for graduate credit at the University of Minnesota)

<b>Fall Qtr</b>	Sec 1	<b>M</b> —6-9:45, ArtB 141, D Johnson
	Sec 2	<b>Sa</b> —8:30 a.m.-12:15, ArtB 161, Brown
<b>Winter Qtr</b>	Sec 3	<b>M</b> —6-9:45, ArtB 141, Myers
	Sec 4	<b>Sa</b> —8:30 a.m.-12:15, ArtB 161, Brown
<b>Spring Qtr</b>	Sec 5	<b>M</b> —6-9:45, ArtB 151, Myers
	Sec 6	<b>Sa</b> —8:30 a.m.-12:15, ArtB 161, Brown

★**ArtS 5310 DIRECT METAL SCULPTURE.** 4 degree credits each quarter (maximum 16 cr). \$68 plus \$20 course fee. Total \$88 each quarter.

See course description for 3301. (Prereq 3301 and †. Meets concurrently with 3301. Limited to 5 students. See **Restrictions**, page 81. Qualified students may register for graduate credit at the University of Minnesota)

<b>Fall Qtr</b>	Sec 1	<b>Th</b> —6-9:45, ArtB 90, Nash
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Symbols, abbreviations, off-campus class locations begin on page 401.

★**Arts 5320 PLASTICS MEDIA: WOOD, STONE CARVING.** 4 degree credits each quarter (maximum 16 cr). \$68 plus \$20 course fee. Total \$88 each quarter.

See course description for 3302. (Prereq 3302. Meets concurrently with 3302. Limited to 5 students. See **Restrictions**, page 81. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 T—6-9:45, ArtB 35, Rose

★**Arts 5340 CONSTRUCTIONS, KINETICS, ELECTRONIC SCULPTURE.** 4 degree credits each quarter (maximum 16 cr). \$68 plus \$20 course fee. Total \$88 each quarter.

See course description for 3304. (Prereq 3304. Meets concurrently with 3304. Limited to 5 students. See **Restrictions**, page 81. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 W—6-9:45, ArtB 80, Baldwin

★**Arts 5510 ADVANCED INTAGLIO.** 4 degree credits each quarter (maximum 16 cr). \$68 plus \$15 course fee. Total \$83 each quarter.

An advanced course in etching, aquatint, mezzatint, and all related techniques in the execution of intaglio prints. Color printing will be taught in conjunction with the above material. (Prereq 12 cr of 3510 or †. Meets concurrently with 1510, 3510. Limited to 25 students. See **Restrictions**, page 81. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 T—6-9:45, ArtB 170, Bethke

**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 each quarter (maximum 16 cr). \$68 plus \$15 course fee. Total \$83 each quarter.

Strong emphasis in creative and individual approach to lithography. Critiques and discussions are directed to understanding the intrinsic qualities of the lithographic medium. (Prereq 12 cr of 1520 or †. Limited to 20 students. Meets concurrently with 1520, 3520. See **Restrictions**, page 81. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 Sa—1:30-4:15, ArtB 176, Priede

★**Arts 5710 PHOTOGRAPHY.** 4 degree credits each quarter (maximum 16 cr). \$68 plus \$15 course fee. Total \$83 each quarter.

Advanced problems in photography. (Prereq 12 cr of 3710 and †. Meets concurrently with 3710. Limited to 5 students. See **Restrictions**, page 81. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 M—6-9:45, ArtB 131

Sec 2 W—6-9:45, ArtB 131

**Winter Qtr** Sec 3 M—6-9:45, ArtB 131

Sec 4 W—6-9:45, ArtB 131

**Spring Qtr** Sec 5 M—6-9:45, ArtB 131

Sec 6 W—6-9:45, ArtB 131

(See also photography courses in physics and journalism)

★**Arts 5810 CERAMICS.** 4 degree credits each quarter (maximum 16 cr). \$68 plus \$25 course fee. Total \$93 each quarter.

Aesthetic awareness and development; techniques and materials. (Prereq †. Limited to 20 students. See **Restrictions**, page 81. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 Th—6-9:45, HoIB 137, Hoard

**Winter Qtr** Sec 2 Th—6-9:45, HoIB 137, Hoard

**Spring Qtr** Sec 3 Th—6-9:45, HoIB 137, Hoard

## winter quarter in mexico

Tentatively scheduled 1977-78.

Symbols, abbreviations, off-campus class locations begin on page 401.

## astronomy (Ast)

*Karlis Kaufmanis, Professor of Astronomy*  
*Ivan Policoff, Associate Professor of Astronomy*  
*John Warner, Assistant Professor of Astronomy*

**Students wishing to use astronomy for CLA Group B must take both 1008 and 1009.**

**IC 0028 FROM HERE TO INFINITY: LECTURES ON ASTRONOMY.** No credit. Kaufmanis.

See Informal Courses, page 201.

**Ast 1008 SOLAR SYSTEM.** 3 degree credits, \$1011. \$46.50

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, Ph 166, Kaufmanis

**Winter Qtr** Sec 2 M—6:30-9, Ph 133, Warner

**Spring Qtr** ★Sec 3 T—7-9:30, Nicollet JHS 200, Burnsville, Policoff  
(Limit 60 students)

**Ast 1009 STARS AND GALAXIES.** 3 degree credits, \$1011. \$46.50

Discussion of constellations, properties and motions of stars, and the structure of the universe. Opportunity for the use of the telescope. Nonmathematical course. (No prereq)

**Fall Qtr** Sec 1 M—6:30-9, Ph 166, Policoff

**Spring Sem** Sec 2 T—6:20-8, Ph 166, Kaufmanis



## biology (Biol)

(See also Anatomy, Ecology and Behavioral Biology; environmental concerns courses, page 318; and WoSt 3001, Women: Biology and Behavior)

*Elmer Birney, Associate Professor of Ecology and Behavioral Biology; Curator of Mammalogy*

*Eville Gorham, Professor of Ecology and Behavioral Biology*

*Norman Kerr, Professor of Zoology*

*William Schmid, Professor of Zoology*

**Biol 1011 GENERAL BIOLOGY.** 5 degree credits, \$77.50 plus \$10 course fee. Total \$87.50 (◆\$25 lecture only) (IS)

◆ An introduction to the principles of biology. The cell, metabolism, heredity, reproduction, ecology and evolution. Lectures will be presented over closed-circuit TV and by multi-media. Students must attend lectures on both Tuesday and Thursday and laboratory sessions on both Tuesday and Thursday. (No prereq)

Symbols, abbreviations, off-campus class locations begin on page 401.

<b>Fall Qtr</b>	Sec 1	<b>Lect TTh</b> —6-7:10, NH 45, Kerr <b>Lab TTh</b> —7:20-9, Kolth S160, S167, S170, S177, S179, S 183
<b>Winter Qtr</b>	Sec 2	<b>Lect TTh</b> —6-7:10, NH 45, Kerr <b>Lab TTh</b> —7:20-9, Kolth S160, S167, S170, S177, S179, S183
<b>Spring Qtr</b>	Sec 3	<b>Lect TTh</b> —6-7:10, NH 45, Kerr <b>Lab TTh</b> —7:20-9, Kolth S160, S167, S170, S177, S179, S183

(See TV course, Biol 1101, Heredity and Human Society, page 312)

**Biol 1103 GENERAL BOTANY.** 5 degree credits, \$3012. \$77.50 plus \$10 course fee. Total \$87.50.

Levels of organization of plants, plant function, plant growth and development, plant reproduction. (Prereq 1011 or §)

<b>Spring Qtr</b>	Sec 1	<b>Lect TTh</b> —6:10-7:20, BioSci 12, StP Campus <b>Lab TTh</b> —7:30-9:30, BioSci 182, StP Campus
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(See also Botany)

**Biol 1105 INTRODUCTION TO EVOLUTIONARY BIOLOGY.** 4 degree credits, \$62. (◆\$31)

History and basis of evolutionary thought, with consideration of the history and future of man; presented from an ecological perspective. (Prereq 1011 or 1101 or §)

<b>Winter Qtr</b>		<b>TTh</b> —6:30-8:30, Ph 150, Birney
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**Biol 1106 GENERAL ZOOLOGY.** 5 degree credits, \$77.50 plus \$10 course fee. Total \$87.50.

A general survey of the animal kingdom. Animal diversity is the major theme of the course, with emphasis placed upon animal phylogeny and evolution. Morphological, physiological, behavioral and ecological characteristics of various groups of animals are compared and contrasted in lectures and the laboratory. (Prereq 1011)

<b>Winter Qtr</b>	Sec 1	<b>Lect T</b> —7-9:30, Z313, Schmid <b>Lab Th</b> —7-10, Kolth P168
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**Biol 3051 BIOLOGY AND THE FUTURE OF MAN.** 4 degree credits, \$62. (◆\$31)

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)

<b>Spring Sem</b>	Sec 1	<b>M</b> —6:20-8:40, Z 313, Gorham
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## botany (Bot)

(See also Biol 1103, General Botany; and Plant Pathology)

*Veta Bonnewell, Instructor in Botany*

**\*Bot 1009 MINNESOTA PLANT LIFE.** 4 degree credits, \$62 plus \$5 special fee. Total \$67.

Nontechnical survey of all groups of plants native to Minnesota; identification and distribution. Class will occasionally meet at 6 p.m. and on Saturdays for field trips. (No prereq. Limited to 60 students)

<b>Spring Qtr</b>	Sec 1	<b>MW</b> —6:20-8:50, Bo 301, BoB6, Bonnewell
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(See other Minnesota courses, page 313)

**Bot 1012 PLANTS USEFUL TO MAN.** 4 degree credits, \$62. (◆\$31)

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)

<b>Winter Qtr</b>	Sec 1	<b>TTh</b> —6:20-8, BoB 6 (demonstration time arr)
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Symbols, abbreviations, off-campus class locations begin on page 401.

## business administration

Your attention is called to the Business Administration Certificate programs, page 386.

Please see the following alphabetical listings for course offerings:

ACCOUNTING  
BUSINESS, GOVERNMENT AND SOCIETY  
BUSINESS LAW  
FINANCE  
INDUSTRIAL RELATIONS  
INSURANCE  
MANAGEMENT  
MANAGEMENT INFORMATION SYSTEMS  
MARKETING  
OPERATIONS ANALYSIS AND MANAGEMENT  
QUANTITATIVE ANALYSIS  
REAL ESTATE  
SALESMANSHIP  
TRANSPORTATION

(See also Economics; Business English Hist 3841, American Business History and Rhetoric)

For non-credit conferences or seminars in business administration, write or call Continuing Business Education, 334C Business Administration; telephone 373-3835.

### **Executive (evening) Master of Business Administration (E.M.B.A.)**

An evening program intended for and limited to persons who are full-time employees of business and other organizations in the Twin Cities metropolitan area leading to the master of business administration degree is offered under the auspices of the Graduate School of Business Administration and the University of Minnesota Graduate School. For information about this program, write or call:

Director of Graduate Study  
Graduate School of Business Administration  
Business Administration Building  
University of Minnesota  
Minneapolis, Minnesota 55455 (373-5505)

## business, government, and society (BGS)

*Rogene Buchholz, Assistant Professor of Business, Government and Society*  
*Robert J. Holloway, Professor of Marketing and Business Law*  
*Albert J. Macek, Northstar Research*

★**BGS 3002 BUSINESS AND SOCIETY.** 4 degree credits, \$62.

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

Symbols, abbreviations, off-campus class locations begin on page 401.

national priorities and the respective roles of the private and public sectors concerning the challenges confronting U.S. society. Includes assessment of the concept, determinants, and indicators of the "quality of life" and the social responsibilities of business. (No prereq. **May not be taken S-N.** Limited to 60 students)

<b>Fall Qtr</b>	Sec 1	<b>M</b> —5:30-8, BlegH 130, Macek
	Sec 2	<b>T</b> —5:30-8, BlegH 130
	Sec 3	<b>W</b> —5:30-8, BlegH 130, Buchholz
<b>Winter Qtr</b>	Sec 4	<b>M</b> —5:30-8, BlegH 130, Macek
	Sec 5	<b>T</b> —5:30-8, BlegH 130
	Sec 6	<b>W</b> —5:30-8, BlegH 130, Buchholz
<b>Spring Sem</b>	Sec 7	<b>M</b> —8:15-9:55, BlegH 130, Holloway
<b>Spring Qtr</b>	Sec 8	<b>M</b> —5:30-8, BlegH 130, Macek
	Sec 9	<b>T</b> —5:30-8, BlegH 130
	Sec 10	<b>W</b> —5:30-8, BlegH 130, Buchholz

**\*BGS 3003 BUSINESS AND THE NATURAL ENVIRONMENT.** 4 degree credits, \$62.

Business and its relationship to the natural environment (air, land, water, plants, animals). The use by industry of renewable and nonrenewable resources. Environmental deterioration caused by business to air, land, and water. Solutions to environmental problems. **May not be taken S-N.** (No prereq. Limited to 60 students)

**Fall Sem** Sec 1 **M**—8:15-9:55, BlegH 120, Holloway

(See other environmental concerns courses, page 318)

## business education

(See Vocational and Technical Education)

## business finance

(See Finance)

## business law (BLaw)

(See also General College Legal Paraprofessions, page 155; EdAd 8224, Legal Implications . . . and General College legal courses)

*Albert O. Andrews, Jr., 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*  
*Thomas A. McEachron, Lecturer in Business Law*  
*Richard A. Nordbye, Lecturer in Business Law*  
*James D. Olson, Lecturer in Business Law*  
*C. Harold Peterson, Lecturer in Business Law*  
*Richard A. Peterson, Lecturer in Business Law*  
*Walter Robb, Lecturer in Business Law*  
*Ross L. Thorfinnson, Lecturer in Business Law*  
*James Van Valkenburg, Lecturer in Business Law*  
*Peter Weiss, Lecturer in Business Law*  
*Dobson West, Lecturer in Business Law*  
*Wells J. Wright, Lecturer and Coordinator of Business Law*  
*Robert H. Zalk, Lecturer in Business Law*

Symbols, abbreviations, off-campus class locations begin on page 401.

**BLaw 0001C COMMON LEGAL PROBLEMS.** 3 certificate credits, \$46.50.

Provides a comprehensive course in everyday legal principles, designed to assist the layman in recognizing his legal rights and more intelligently and efficiently managing his personal affairs. This course considers legal problems such as: purchase, sale, rental, or lease of homes and other real property; making of wills and handling of estates; preparation of income tax returns; rights of persons injured in accidents and liability of persons causing accidents; liability for various other types of tortious conduct; making of contracts; sale of personal property; negotiable instruments; formation and operation of small business as a sole proprietorship, partnership or corporation; workmen's compensation laws; rights and responsibilities within family, including divorce; collection of monies through garnishment, attachment, and mechanic's liens; criminal law. (No prereq)

**Fall Sem** ★Sec 1 Th—6:20-8, Kellogg HS 168-170, Little Canada; C H Peterson  
(Limit 45 students)

**Spring Sem** Sec 2 Th—6:20-8, NH 209, C H Peterson

**BLaw 0098C BUSINESS LAW—LAW OF REAL PROPERTY.** 3 certificate credits, \$46.50.

The study of the nature and classification of real estate; deeds and conveyances; landlord and tenant; recording and abstracting; torrens titles; mortgages; wills; probating of estates, etc. (No prereq)

**Fall Sem** Sec 1 W—6:20-8, BlegH 125, R A Peterson

**Spring Sem** Sec 2 Th—6:20-8, AndH 270, Olson

**BLaw 3058-3078, 3088 BUSINESS LAW.** 4 degree credits each term, \$62 each term. (IS)

Sequence of courses in Business Law in the fundamental principles of law for the business and professional man or woman. **3058:** Study of origin, history and development of law, systems of courts, legal procedure, and extensive study of law of contracts, the basic law affecting business transactions; and the law of the relationship of principal and agent, master and servant, employer and employee. **3078:** Partnerships, corporations, and the law of real property, including nature, creation, and terms of the relations, rights and liabilities of parties involved in business associations; together with study of the basic concepts and principles of real property law. **3088:** Study of the basic concepts of personal property, including rights of possessors, bailees, holders of security interests, etc.; and extensive study of the law of sales of goods 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 T—7-9:30, StP Capitol Complex, Civil Service Center,  
Van Valkenburg (Limit 50 students)  
★Sec 2 W—7-9:30, Richfield HS 341, Zalk (Limit 45 students\*)  
★Sec 3 Th—7-9:30, Sandburg JHS 213, Golden Valley;  
Diessner (Limit 45 students)  
Sec 4 Sa—9 a.m.-11:30, BlegH 205  
3078 Sec 5 W—6:20-8:50, BlegH 220  
3088 Sec 6 T—6:20-8:50, BlegH 155, Nordbye  
**Fall Sem** 3058 Sec 7 M—8:15-9:55, BlegH 155, West  
★Sec 8 T—6:20-8, BlegH 205, Robb (Limit 45 students)  
★Sec 9 W—6:20-8, BlegH 145, Lovett (Limit 45 students)  
Sec 10 Th—6:20-8:50, BlegH 145  
3078 Sec 11 W—8:15-9:55, BlegH 125, Lovett  
**Winter Qtr** 3058 ★Sec 12 M—6:20-8:50, Southwest HS 9, Mpls; Andrews  
(Limit 60 students)  
★Sec 13 T—7-9:30, Kellogg HS 233, Little Canada;  
Hassel (Limit 35 students)  
Sec 14 W—6:20-8:50, BlegH 360, Zalk  
★Sec 15 M—6:20-8:50, WCCO Radio Bldg 512, Mpls; Mahler  
(Limit 50 students)  
3078 ★Sec 16 T—6:30-9, Richfield HS 341, Van Valkenburg  
(Limit 45 students)  
3088 Sec 17 W—6:20-8:50, BlegH 220, West

Symbols, abbreviations, off-campus class locations begin on page 401.



- Spring Sem 3058** Sec 18 **W**—6:20-8, BlegH 150, Robb  
 Sec 19 **Sa**—9-11:30 a.m., BlegH 215
- 3078** Sec 20 **T**—6:20-8, BlegH 215
- 3088** Sec 21 **W**—6:20-8, BlegH 230
- Spring Qtr 3058** ★Sec 22 **T**—7-9:30, Sandburg HS 213, Golden Valley, Hassel  
 (Limit 45 students)
- Sec 23 **Th**—6:20-8:50, BlegH 250, Diessner
- ★Sec 24 **W**—7-9:30, Hillside JHS, Maplewood  
 (Limit 60 students)
- 3078** Sec 25 **Th**—6:20-8:50; BlegH 220, VanValkenburg
- 3088** ★Sec 26 **T**—6:20-8:50, Richfield HS 341; Nordbye  
 (Limit 45 students)

**C**

## business studies

(See General College)

## chemistry (Chem)

(See also Professional Recognition Program in Engineering and Science, page 127; and Natural Science 1005, Physical World: Chemistry)

*Robert Brasted, Professor of Chemistry*

*Keith Coad, Planning Systems Analyst, 3M Company*

*Edward Meehan, Professor of Chemistry*

*Richard Morath, St. Thomas College Professor of Chemistry*

A \$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.

**Chem 1004-1005 GENERAL PRINCIPLES OF CHEMISTRY.** 5 degree credits each semester, \$77.50 plus \$5 special fee and \$6 course fee. Total \$88.50 each semester.

An introduction to chemistry from the standpoint of atomic structure; periodic properties of the elements and compounds derivable from structural considerations; a study of the laws governing the behavior of matter, theories of solutions, acids, bases, and equilibrium; introduction to chemistry of carbon compounds. (Prereq elementary algebra. Higher algebra, trigonometry, H.S. chemistry, H.S. physics strongly recommended for 1004; 1004 for 1005). Meet the first Tuesday in SciCB 375

**Fall Sem 1004** Sec 1 **Lab T**—6-9:30, SciCB 375, SmithH 210

**Lect Th**—6:20-8:30, SciCB 375, Brasted

**Spring Sem 1005** Sec 2 **Lab T**—6-9:30, SciCB 375, SmithH 210

**Lect Th**—6:20-8:30, SciCB 375, Brasted

Symbols, abbreviations, off-campus class locations begin on page 401.

**Chem 1006 PRINCIPLES OF SOLUTION CHEMISTRY.** 4 degree credits, \$62 plus \$5 special fee and \$6 course fee. Total \$73.

The lecture and laboratory work are concerned primarily with the descriptive chemistry of the elements, especially with the properties (including stereochemistry) of transition metal complex ions, their preparation, absorption spectrometry and some applications to physiological systems. Selected cations and anions are studied in the laboratory with regard to properties in aqueous solution and their detection. Both heterogeneous and homogeneous equilibria in solution are applied to separation techniques. Lecture material also includes oxidation reduction systematics and their use in estimating reaction spontaneity. Atomic, ionic and molecular structure serve as underlying bases for this study of simple and complex ions. (Prereq 1005 or 1032. Students attend twice a week)

**Fall Sem** Sec 1 **Lect T**—6:20-8:00, SmithH 325, Coad  
**Lab Th**—6:20-9:30, SmithH 325

**Chem 3100 QUANTITATIVE ANALYSIS.** 3 degree credits, \$46.50

A survey of quantitative methods of analysis. Lecture. Not for chemistry majors. (Prereq 1005)

**Fall Qtr** Sec 1 **M**—6:30-8:45, SmithH 325, Meehan

**★Chem 3301-3302 ELEMENTARY ORGANIC CHEMISTRY LECTURE.** 3 degree credits each semester, \$46.50 each semester.

Important classes of organic compounds, both aliphatic and aromatic, together with some heterocyclic compounds. (Prereq 1005 or 1032 or equiv for 3301; 3301 or 3305 or 13305 for 3302. Limited to 60 students)

**Fall Sem 3301** Sec 1 **Lect T**—6-8:30, SmithH 225, Morath

**Spring Sem 3302** Sec 2 **Lect T**—6-8:30, SmithH 225, Morath

**★Chem 3305-3306 ELEMENTARY ORGANIC CHEMISTRY LABORATORY.** 2 degree credits each semester, \$31, plus \$5 special fee and \$6 lab fee. Total \$42 each semester.

Laboratory work includes the preparation of typical substances treated in 3301-3302. (Prereq 3301 or 13301 for 3305, 3302 or 13302 for 3306. Limited to 49 students)

**Fall Sem 3305** Sec 1 **Lab Th**—6-9:30, SmithH 349

**Spring Sem 3306** Sec 2 **Lab Th**—6-9:30, SmithH 349

## chicano studies (Chic)

(See also Latin American Studies; other ethnic studies courses, page 300; Mus 5704, 5705, Latin American Music; Geog 3131, Middle America; Anth 5222, Peoples and Cultures of Middle America; Span 1502, Culture, Civilization of Latin America; and Pol 5455, Latin American Government and Politics)

*Manuel Guerrero, Professor of Chicano Studies*

**Chic 1107 INTRODUCTION TO CHICANO STUDIES.** 5 degree credits, \$77.50. (♦\$38.75)

Examines the conditions which led to Chicano social, political, economic and cultural consciousness and the forms in which that consciousness was expressed. Of particular interest will be the farmworker struggle, land grant litigation, urban strife, and education. (No prereq)

**Fall Qtr** Sec 1 **W**—6:20-8:50, ForH 170, Guerrero



## child psychology (CPsy)

(See also IC 0005, Your Bright Child in School; IC 0033, Masculine/Feminine: Influences on Children's Sex-Role Development; GC 1722, Parent-Child Relationships; and Youth Studies)

Symbols, abbreviations, off-campus class locations begin on page 401.

*Judith Brown, Assistant Director for special schools, Special Education Division, Minneapolis Public Schools*

*Emily Bushnell, National Institute of Mental Health Trainee in Child Psychology*

*W. Andrew Collins, Associate Professor, Institute of Child Development*

*Doran French, Graduate Assistant, Institute of Child Development*

*Lynn Goldsmith, Graduate School Fellow, Institute of Child Development*

*Seymour Gross, Clinical Associate Professor, Department of Health Care*

*Psychology and Director of Mental Health Services, Pilot City Health Center*

*Harold Grotevant, Graduate School Fellow, Institute of Child Development*

*Marita Hopmann, Graduate School Fellow, Institute of Child Development*

*Harold Ireton, Associate Professor, Department of Family Practice and*

*Community Health*

*Daniel Keating, Assistant Professor, Institute of Child Development*

*Allen Keniston, Graduate Assistant, Institute of Child Development*

*Stanley Kriss, Institute of Child Development*

*Michael Maratsos, Associate Professor, Institute of Child Development*

*Donald Mohr, National Institute of Mental Health Trainee in Child Psychology*

*Murray Reed, Chief Psychologist, Wilder Child Guidance Clinic*

*John Rieser, National Institute of Mental Health Trainee in Child Psychology*

*Phillip Salapatek, Professor, Institute of Child Development*

*Grace Warfield, Associate Professor of Special Education*

*Albert Yonas, Associate Professor, Institute of Child Development*

#### **A MAJOR IN CHILD PSYCHOLOGY (CLA) CAN BE COMPLETED IN THE EVENING.**

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

#### **B.A. Major Sequence**

Required Preparatory Courses

Psy 1001 or 5 cr of introductory psychology; Psy 1004-1005; CPsy 1301

Major Requirements

Minimum of 32 3xxx- or 5xxx-level credits, to include one course from 3302, 3303, 3304 or 5303; Psy 3801 or equivalent; 2 courses from 3331, 3347, 5329, 5331, 5341, 5343, 5345; 2 courses from 3311, 3313, 5311, 5313, 5315, 5319, 5333, 5334, 5335, 5339; and a minimum of 8 additional credits from any two or more 3xxx or 5xxx CPsy courses.

Child Psychology majors may not count Psychology credits toward their 30 3xxx or 5xxx credits outside their major.

**You need not be majoring in Child Psychology to register for these classes.**

**Child Psychology courses may be taken A-N or S-N in CLA.**

#### **CPsy 1301 INTRODUCTORY CHILD PSYCHOLOGY.** (old 3301). 4 degree credits, \$62. (IS)

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**—6:20-8:50, CD 216, Salapatek

★Sec 2 **T**—7-9:30, Richfield HS 141, Goldsmith (Limit 30 students)

**Winter Qtr** Sec 3 **T**—6:20-8:50, CD 216, Yonas

★Sec 4 **W**—7-9:30, Kellogg HS 235, Little Canada; Salapatek

(Limit 30 students)

**Spring Qtr** ★Sec 5 **M**—6:20-8:50, Sandburg HS 205, Golden Valley, French

(Limit 30 students)

Sec 6 **W**—6:20-8:50, CD 216, Maratsos

#### **★CPsy 1310 TOPICS IN CHILD PSYCHOLOGY.** 3 degree credits, \$46.50.

Readings and experiences proposed by the student related to cognitive, personality, perceptual, language, and social development in children. Focus this offering: **child's environment.**

Symbols, abbreviations, off-campus class locations begin on page 401.

How various aspects of the environment affect a child's behavior and development. Family position; kinds of infant stimulation experiences; quality and kind of educational opportunities in the home; kind and amount of T.V. watching; communication patterns of the child's home; nutritional habits; design of the child's space and play materials; the child's internal environment, his thoughts, feelings, and opinions. Reading in area of special interest in child psychology. (Prereq 1. Meets concurrently with 5310. Limited to 35 students)

**Fall Qtr** Sec 1 M—7-9:30, Nicollet JHS 200, Burnsville; Carlson  
**Winter Qtr** Sec 2 M—7-9:30, Irondale HS 105, New Brighton; Carlson

**CPsy 3302 INFANCY.** 4 degree credits, \$62.

Perceptual, motor, emotional, social, and cognitive development during the first two years of life; the developing infant in his social and physical environment. (Prereq 1301 or old 3301)

**Spring Qtr** Sec 1 T—6:20-8:50, CD 216, Salapatek

**CPsy 3303 ADOLESCENT PSYCHOLOGY.** 4 degree credits, \$5303, \$62.

Physical, cognitive, and social development during adolescence. (Prereq 5 or introductory psychology. Meets concurrently with 5303)

**Fall Qtr** Sec 1 M—6:20-8:50, Bu 120, Grotevant  
**Spring Qtr** ★Sec 2 M—7-9:30, Richfield HS 144, Keniston  
(Limit 30 students)

**CPsy 3304 INTRODUCTION TO MATURITY AND AGING.** 4 degree credits, \$62.

Empirical and theoretical issues in developmental psychology of maturity and aging; survey of perceptual-motor, cognitive, and social-psychological changes from young adulthood to old age. (Prereq 1301 or old 3301 or equiv)

**Winter Qtr** Sec 1 M—6:20-8:50, CD 216, Keating

**CPsy 3311 BEHAVIORAL AND EMOTIONAL PROBLEMS.** 4 degree credits, \$5311, \$62.

Description, etiology, development of behavioral and emotional problems of children; treatment where germane. Excluded are problems deriving primarily from sensory or physical handicap, mental retardation, or neurological impairment. (Prereq 1301 or old 3301 or equiv. Meets concurrently with 5311)

**Fall Qtr** ★Sec 1 W—7-9:30, Kellogg HS 229, Little Canada, Kriss  
(Limit 30 students)

**Winter Qtr** Sec 2 T—6:20-8:50, Bu 120, Ireton  
**Spring Qtr** Sec 3 Th—6:20-8:50, WuH 230, Reed

**CPsy 3313 PSYCHOLOGY OF ATYPICAL CHILDREN.** 4 degree credits, \$5313, \$62.

Problems of research, assessment, and behavior associated with atypicality; evaluation of research in areas of major concern for sensory, language, intellectual, and physical deviation. (Prereq 1301 or old 3301 or equiv. Meets concurrently with 5313)

**Fall Qtr** Sec 1 W—6:20-8:50, CD 218, Brown

**CPsy 3331 PROCESSES OF SOCIALIZATION OF CHILDREN.** 4 degree credits, \$5331, \$62. (♦\$31)

Processes of social learning: identification, social influence, imitation, reward and punishment, internalization, and object choice. (Prereq 1301 or 3301 or equiv. Meets concurrently with 5331)

**Fall Qtr** Sec 1 Th—6:20-8:50, WuH 230, Mohr  
**Spring Qtr** ★Sec 2 W—6:20-8:50, Richfield HS 144, Collins (Limit 30 students)

**★CPsy 3347 CHILDREN'S LEARNING AND INTELLECTUAL SKILLS.** [replaces 5347] 4 degree credits, \$62.

Current research on learning, problem solving, intellectual performance in children; application to practical contexts. (Prereq 1301 or 3301 or equiv. Limited to 30 students)

**Winter Qtr** Sec 1 T—7-9:30, Kellogg HS 235, Little Canada, Rieser

Symbols, abbreviations, off-campus class locations begin on page 401.

**CPsy 5303 ADOLESCENT PSYCHOLOGY.** 4 degree credits, \$3303, \$68. (IS)

Physical, cognitive, and social development during adolescence. (Prereq 5 cr introductory psychology. Meets concurrently with 3303. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 M—6:20-8:50, Bu 120, Grotevant

**Spring Qtr** ★Sec 2 M—7-9:30, Richfield HS 144, Keniston (Limit 30 students)

**★CPsy 5310 TOPICS IN CHILD PSYCHOLOGY.** 3 degree credits, \$51.

See description for 1310. Meets concurrently with 1310. (Prereq 3. Limited to 35 students. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 M—7-9:30, Nicollet JHS 200, Burnsville; Carlson

**Winter Qtr** Sec 2 M—7-9:30, Irondale HS 105, New Brighton; Carlson

**CPsy 5311<sup>1</sup> BEHAVIORAL AND EMOTIONAL PROBLEMS.** 4 degree credits, \$3311, \$68.

See 3311 for description. (Prereq CPsy 3301 or equiv. Meets concurrently with 3311. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** ★Sec 1 W—7-9:30, Kellogg HS 229, Little Canada, Kriss  
(Limit 30 students)

**Winter Qtr** Sec 2 T—6:20-8:50, Bu 120, Ireton

**Spring Qtr** Sec 3 Th—6:20-8:50, WuH 230, Reed

**CPsy 5313 PSYCHOLOGY OF ATYPICAL CHILDREN.** 4 degree credits, \$3313, \$68.

Problems of research, assessment, and behavior associated with atypicality; evaluation of research in areas of major concern for sensory, language, intellectual, and physical deviation. (Prereq 1301 or old 3301 or equiv. Meets concurrently with 3313. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 W—6:20-8:50, CD 218, Brown

**CPsy 5315 INTRODUCTION TO MENTAL RETARDATION.** 4 degree credits, \$SpEd 5120, \$68.

Psychological and educational problems related to the mentally retarded. (Prereq 1301 or old 3301 or equiv. Meets concurrently with SpEd 5120. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 Th—6:20-8:50, Pt 214, Warfield

**Spring Qtr** Sec 2 Th—6:20-8:50, Pt 214, Warfield

**★CPsy 5319 CLINICAL PROCEDURES WITH CHILDREN AND YOUTH.** 4 degree credits, \$68.

Survey of assessment and intervention procedures of child clinical psychology in clinical and community settings; primarily for students not majoring in clinical psychology. (Prereq 12 cr in psychology, child psychology, educational psychology, or sociology. Limited to 55 students. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 T—6:20-8:50, Pt 215, Gross

**CPsy 5331 PROCESSES OF SOCIALIZATION OF CHILDREN.** 4 degree credits, \$3331, \$68.

Processes of social learning; identification, imitation, reward and punishment, internalization and object choice. (Prereq 1301 or old 3301 or equiv. Meets concurrently with 3331. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 Th—6:20-8:50, WuH 230, Mohr

**Spring Qtr** ★Sec 2 W—6:20-8:50, Richfield HS 144, Collins (Limit 30 students)

**★CPsy 5343 COGNITIVE DEVELOPMENT.** 4 degree credits, \$68. (♦\$34)

Development of cognitive processes; discussion of relevant theory, research literature and methodology. (Prereq 1301 or 3301. Limited to 35 students. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 T—7-9:30, Sandburg HS 209, Golden Valley, Hopmann

Symbols, abbreviations, off-campus class locations begin on page 401.

★**CPsy 5345 LANGUAGE DEVELOPMENT.** 4 degree credits, \$68. (♦\$34)

Development of structure and function of language; factors influencing development, methodological problems, language scales, theories. (Prereq 1301 or old 3301. Limited to 35 students. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 M—7-9:30, Richfield HS 143, Bushnell

## chinese

(See East Asian Languages)

## civil and mineral engineering (CE), and geo-engineering (GeoE)

(Your attention is called to the Professional Recognition Program in Engineering and Science, page 127; and environmental concerns courses, page 318.)

*Ladislav Cerny, Associate Professor of Civil and Mineral Engineering*  
*G. Lee Christensen, Assistant Professor of Civil and Mineral Engineering*  
*Steven J. Eisenreich, Assistant Professor of Civil and Mineral Engineering*  
*Jesse E. Fant, Professor of Civil and Mineral Engineering*  
*Gerald W. Johnson, Assistant Professor of Civil and Mineral Engineering*  
*George Mullenger, Assistant Professor of Civil and Mineral Engineering*  
*Lyle P. Pederson, Assistant Professor of Civil and Mineral Engineering*  
*Otto D. L. Strack, Assistant Professor of Civil and Mineral Engineering*

Your attention is called to the Undergraduate Development Certificate in Civil Engineering—90 credits, page 396.

Through registration in Extension Classes, students may earn, over a period of four years, all Civil Engineering credits required for a B.S. in Civil Engineering. See page 365 for course options.

**CE 0005 REFRESHER COURSE FOR CIVIL ENGINEERS.** No credit, \$62.

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, Pederson, Bowers, Maier,  
Christensen, Cerny

★**CE 3100 INTRODUCTION TO SURVEYING AND MAPPING.** 4 degree credits, \$62.

Theory of precision measurements of distance, elevation, angle, and direction. Elements of coordinate systems; datum planes, and maps. Use of aerial photographs for mapping. Fundamentals of geometrics for design, grades, and vertical and horizontal curvature. (Prereq Math 1211. Limited to 40 students)

Fall Qtr Sec 1 Sa—9 a.m.-1 p.m., Ex 193, Johnson

**CE 3300 ELEMENTS OF SOIL MECHANICS.** 4 degree credits, \$62.

Physical properties of soils; relationships with water; stress distribution. Classification, compaction, and strength tests. Geological features and engineering properties of rocks. Five Saturday laboratories will be arranged. (No prereq. Knowledge of algebra and statics is desirable)

Fall Qtr Sec 1 Lect M—6-9:20, Ex 177, Pederson  
Lab Sa—to be arr.

Symbols, abbreviations, off-campus class locations begin on page 401.

**CE 3500 INTRODUCTION TO ENVIRONMENTAL ENGINEERING.** 4 degree credits, \$62.

Needs of urbanized society and their impact on the environment; physical, chemical, and biological characterization of the environment; environmental quality standards; technology for pollution abatement. (Prereq 3400 or 13400 or †)

**Fall Qtr** Sec 1 MW—6-8, Ex 193

new

**CE 5102 SITE AND ROUTE ENGINEERING.** 4 degree credits, \$68.

Site and route design fundamentals and problems based on spatial data obtained through photogrammetric mapping. Problems in geometric design; grades, horizontal and vertical curves; fitting of design to topography; earthwork, area and volumes; and drainage. Construction control and layout. (Prereq 3100. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 T—6:20-9, MinMet 124, Fant

new

**CE/GeoE 5320 GEOMECHANICS I.** 4 degree credits, \$68.

Groundwater flow; stress and strain analysis in soil and rock; effective stresses; testing techniques; solutions of simple elasticity problems; stress-strain relations in soil and rock. (Prereq 3300. A joint Day/Extension class. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 MW—5:30-8, MinMet 120, Strack, Mullenger

new

**CE/GeoE 5321 GEOMECHANICS II.** 4 degree credits, \$68.

One-dimensional consolidation; tests; bearing capacity and settlements; retaining walls and excavations; slope stability in soil and rock; influence of groundwater; pile foundations. (Prereq 5320. A joint Day/Extension class. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 MW—5:30-8, MinMet 120, Strack, Mullenger

new

**CE 5500 ANALYSIS AND DESIGN OF WATER SUPPLY SYSTEMS.** 4 degree credits, \$68.

Planning and engineering design considerations in developing water supply systems for urban centers. Supply quality, storage, treatment, distribution, and cost analysis. (Prereq 3500 or †. A joint Day/Extension class. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 MW—5-7, Ex 193, Eisenreich

new

**CE 5501 ANALYSIS AND DESIGN OF WASTE WATER SYSTEMS.** 4 degree credits, \$68.

Planning and engineering design considerations in developing waste disposal systems for urban centers. Volumes and quality of waste streams, treatment and ultimate disposal of domestic and industrial waste waters, and storm water runoff. Environmental effects, cost, and political aspects of ultimate disposal. (Prereq 3500 or †. A joint Day/Extension class. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 MW—5-7, Ex 193, Christensen

new

## civil defense

(See Emergency Services Education)

## classical civilization

### A MAJOR IN CLASSICAL CIVILIZATION CAN BE COMPLETED IN THE EVENING.

Those courses required in the major are offered every 4 years. Interested students should discuss your plans with an Extension counselor (373-3905).

Classical Civilization is an interdisciplinary major. This year Extension courses which apply toward the fulfillment of major requirements are offered in classics, art history, philosophy, humanities, English, Latin, anthropology, linguistics, and

Symbols, abbreviations, off-campus class locations begin on page 401.

Spanish. Extension Counseling will send the full description of major requirements and a list of courses offered through Extension Classes in 1976-77 which may apply toward the degree.

## classics (Clas)

(See also Greek, Latin, Art History and related courses in History and Humanities)

*William Coulson, Assistant Professor of Classics*  
*Steven Derfler, Teaching Associate in Classics*  
*Gerald M. Erickson, Associate Professor of Classics*  
*Rosanne Gulino, Teaching Associate in Classics*  
*A. Thomas Kraabel, Associate Professor of Classics*  
*Helen Moritz, Instructor in Classics*  
*Steven Oberhelman, Teaching Associate in Classics*  
*George Rochefort, Assistant Professor of Classics*  
*Robert P. Sonkowsky, Professor of Classics*  
*Vicky Walsh, Teaching Associate in Classics*  
*David Wigtil, Teaching Associate in Classics*

**NOTE—Classics (Clas) courses require no knowledge of Latin or Greek.**

**You need not be majoring in Classical Civilization to register for these classes.**

**IC 0007 GREEK AND ROMAN MYTHOLOGY: A WORLD OF LOVE AND CHANGE.** No credit. Rochefort.

See Informal Courses, page 198.

**Clas 1019 MAGIC, WITCHCRAFT, AND THE OCCULT IN GREECE AND ROME.** 4 degree credits, \$62. (♦\$31)

Reading, lecture, and discussion on magic and witchcraft in classical literature and mythology; on the practice of magic as observed from papyri, epigraphical and literary evidence; and on beliefs and practices concerning prophecy and the interpretation of dreams. Analysis of the changing role of witchcraft and divine possession from earlier to later antiquity with consideration of the relation of these phenomena to changes in economic and social conditions. (No prereq. May be applied toward the CLA foreign language requirement, Route II for Greek and Latin [see page 359])

**Winter Qtr** Sec 1 **M**—6-8:30, FolH 308, Erickson

**Clas 1042 GREEK AND ROMAN MYTHOLOGY.** 3 degree credits, \$46.50 (♦\$23.25)

Classical myths; stories of gods, demigods, and heroes that are a basic component of European cultural heritage; their artistic, religious, psychological, and anthropological implications. (No prereq. May be applied toward the CLA foreign language requirement, Route II for Greek and Latin [see page 359])

**Spring Qtr** Sec 1 **M**—6-8:30, FolH 308, Rochefort

**Clas 1043 INTRODUCTION TO GREEK AND ROMAN ARCHAEOLOGY.** 4 degree credits, \$62. (♦\$31)

Archaeological evidence on selected aspects of daily life in prehistoric and classical times, including such activities as food producing, town building and craft industries of the townspeople of Greece and Italy. (No prereq. May be applied toward the CLA foreign language requirement, Route II for Greek and Latin [see page 359])

**Fall Qtr** Sec 1 **T**—6-8:30, FolH 303, Walsh, Gulino

**Clas 1048 TECHNICAL TERMS OF SCIENCE, MEDICINE, AND HUMANITIES.** 3 degree credits, \$3048. \$46.50 (♦\$23.25) (IS)

Computer assisted instruction in terminology derived from Greek and Latin. Programmed learning and self-pacing in order to acquire facility in specialized

Symbols, abbreviations, off-campus class locations begin on page 401.



vocabularies of scientific and health-related fields. Some attention to humanistic terms. Flexible scheduling throughout the week and Saturday. (No prereq. Meets concurrently with 3048)

**Spring Qtr** Sec 1 **Th**—6:20-8, FoIH 303 (first mtg only) Oberhelman  
**Voluntary labs—Assistance labs:** M—5-6; TW—6-7; Th—7-8;  
 Sa—10-11 a.m. WaLib LRC  
**Independent labs:** M-Th—8-10; F—8-5; Sa—9 a.m.-5;  
 Su—1-10. WaLib LRC

**Clas 1049 INTRODUCTION TO BIBLICAL ARCHAEOLOGY.** 4 degree credits, \$62. (◆\$31)

Introduction to the Archaeology of Palestine, historical geography of the region and introduction to archaeological methods. (No prereq. May be applied toward the CLA foreign language requirement, Route II for Hebrew [see page 359])

**Spring Qtr** Sec 1 **M**—7-9:30, StP Talmud Torah

**Clas 3007 THE WORLD OF GREECE.** 4 degree credits, \$5007. To be offered 1977-78.

**Clas 3008 THE WORLD OF ROME.** 4 degree credits, \$5008. \$62. (◆\$31)

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. May be applied toward the CLA foreign language requirement, Route II for Latin [see page 359]. Meets concurrently with 5008)

**Fall Qtr** Sec 1 **M**—6-8:30, FoIH 308, Rochefort

**Clas 3048 TECHNICAL TERMS OF SCIENCE, MEDICINE, AND HUMANITIES.** 3 degree credits, \$1048. \$46.50 (◆\$23.25)

See description for 1048. (Prereq jr. Meets concurrently with 1048)

**Spring Qtr** Sec 1 **Th**—6:20-8:00, FoIH 303 (first mtg only) Oberhelman  
**Voluntary labs—Assistance labs:** M—5-6; TW—6-7; Th—7-8;  
 Sa—10-11 a.m. WaLib LRC  
**Independent labs:** M-Th—8-10; F—8-5; Sa—9 a.m.-5;  
 Su—1-10. WaLib LRC

**Clas 3071 RELIGION IN ANTIQUITY: GREEK, HELLENISTIC.** 4 degree credits, \$5071, \$62. (◆\$31) (IS)

Greek religion of the Archaic, Classical and Hellenistic periods. Eclipse of city-state and "failure of nerve." Mystery religions and impact of eastern cults. Ancient myths and need for allegory. Ruler-worship. Gnosticism. Judaism in Greek world; Dead Sea scrolls. (Prereq jr. May be applied toward the CLA foreign language requirement Route II for Greek [see page 359]. Meets concurrently with 5071.)

**Spring Qtr** Sec 1 **Th**—6:20-8:50, FoIH 308, Kraabel

**Clas 3072 RELIGION IN ANTIQUITY: THE NEW TESTAMENT.** 4 degree credits, \$5072. \$62. (◆\$31)

First-century Israel under Roman rule. Jesus of Nazareth. Earliest Christian communities. Jewish Christianity. Mission to gentiles. Paul the apostle. Beginnings of New Testament. (Prereq jr. Meets concurrently with 5072)

**Winter Qtr** Sec 1 **Th**—6:20-8:50, FoIH 308, Kraabel

**Clas 3082 GREEK TRAGEDY IN TRANSLATION (AESCHYLUS, SOPHOCLES, EURIPIDES).** 4 degree credits, \$5082. \$62. (◆\$31)

Origin of European drama as distinct literary form; characteristics of Greek tragedy; ancient theaters and theatrical conventions. Selected tragedies. Problems posed in relation to cultural patterns of the time. (No prereq. May be applied toward the CLA foreign language requirement, Route II for Greek [see page 359]. Meets concurrently with 5082)

**Fall Qtr** Sec 1 **W**—6-8:30, FoIH 306, Moritz

(See TV course, Clas 3145, 5145 Myths and the Modern World, page 312)

Symbols, abbreviations, off-campus class locations begin on page 401.

**Class 3162 ROMAN ART AND ARCHAEOLOGY.** 5 degree credits, \$ArH 3162. \$77.50. (♦\$38.75)



Examination of what is Roman in Roman Art and material culture through study of how it comes into being; examination of the degree of change, or continuity, or 'progress' or 'decay' in the later Empire. (No prereq. May be applied toward the CLA foreign language requirement Route II for Latin [see page 359]. Meets concurrently with ArH-3162.)

Winter Qtr Sec 1 W—6-8:30, FolH 209, Coulson

**Class 5005 MADNESS AND DEVIANT BEHAVIOR IN ANCIENT GREECE AND ROME.** 4 degree credits. To be offered 1977-78. (IS)

**Class 5006 GREAT MEN IN ANCIENT BIOGRAPHY.** 4 degree credits, \$68. (♦\$34)



In-depth study of the lives of several famous and influential people, such as Alexander, Caesar, Cicero, Aristides (the hypochondriac), Apollonius of Tyana (the wonder worker), Apuleius (topics may vary from year to year). Consideration of the varying interpretations of their accomplishments, factors which shaped their characters, criteria for "greatness," the social and political milieu in which they functioned, the hero myth and history; introduction to the psycho-historical approach to biography. (No prereq. May be applied toward the CLA foreign language requirement Route II for Greek and Latin [see page 359]. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 Th—6-8:30, FolH 207, Erickson

**Class 5007 THE WORLD OF GREECE.** 4 degree credits, \$3007. To be offered 1977-78.

**Class 5008 THE WORLD OF ROME.** 4 degree credits, \$3008. \$68.

See course description for 3008. (No prereq. Meets concurrently with 3008 but requires additional work. May be applied toward the CLA foreign language requirement, Route II for Latin [see page 359]. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 M—6-8:30, FolH 308, Rochefort

**Class 5071 RELIGION IN ANTIQUITY: GREEK, HELLENISTIC.** 4 degree credits, \$3071. \$68.



See course description for 3071. (Prereq 3. Meets concurrently with 3071 but requires additional work. May be applied toward the CLA foreign language requirement Route II for Greek [see page 359]. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 Th—6:20-8:50, FolH 308, Kraabel

**Class 5072 RELIGION IN ANTIQUITY: THE NEW TESTAMENT.** 4 degree credits, \$3072. \$68.

See course description for 3072. (Prereq 3. Meets concurrently with 3072 but requires additional work. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 Th—6:20-8:50, FolH 308, Kraabel

**Class 5082 GREEK TRAGEDY IN TRANSLATION (AESCHYLUS, SOPHOCLES, EURIPIDES).** 4 degree credits, \$3082.



See course description for 3082. (No prereq. Meets concurrently with 3082 but requires additional work. May be applied toward the CLA foreign language requirement, Route II for Greek [see page 359]. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 W—6-8:30, FolH 306, Moritz

**Class 5089 INTRODUCTION TO BIBLICAL ARCHAEOLOGY.** 4 degree credits, \$68. (♦\$34)



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

Symbols, abbreviations, off-campus class locations begin on page 401.

prereq. May be applied toward the CLA foreign language requirement, Route II for Hebrew [see page 359]. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 Th—6-8:30, FolH 308, Kraabel

## communication and composition

(See Communication and Composition courses in English; General College; Speech; Study Skills; Rhetoric; and Public Health for Communications for health professionals)

## computer science (CSci)

Your attention is called to the Undergraduate Development Certificate in  
Computer Science, 45 and 90 credits, page 392;  
Management Information Systems, page 219; and  
Computer Science degree, page 366.

*Donald Boyd, Assistant Professor of Computer Science*  
*Krzysztof Frankowski, Associate Professor of Computer Science*  
*William Franta, Associate Professor of Computer Science*  
*Oscar Ibarra, Associate Professor of Computer Science*  
*Jay A. Leavitt, Associate Professor of Computer Science*  
*Kurt Maly, Assistant Professor of Computer Science*  
*William D. Munro, Professor of Computer Science*  
*Sartaj Sahni, Assistant Professor of Computer Science*  
*G. Michael Schneider, Assistant Professor of Computer Science*  
*Steven Weingart, Assistant Professor of Computer Science*

### A MAJOR IN COMPUTER SCIENCE CAN BE COMPLETED IN THE EVENING.

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

### B.S. Major Sequence (Institute of Technology)

#### Required Preparatory Courses

Math 1311-1321-1331, 3142, 3211; Stat 3091 or 5121 for students intending to take additional work in statistics; at least one additional 3xxx- or 5xxx-level mathematics or statistics course (recommended: Math 5701)

#### Major Requirements

3001, 3105, 3106, 3107, 5102, 5104, 5107, 5121, 5201, 5301, 5400, 5501

Elective courses which form a coherent program in CSci and application areas; for example health sciences computing, transportation systems, environmental engineering, machine design, software systems, mathematics of computation, theory of computation, etc. These courses are to be selected from additional 5xxx-level CSci courses and adviser-approved courses from other departments.

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

## computer science prerequisites in the institute of technology

The entrance requirement for the Institute of Technology and the prerequisite for Math 1311 is 4 years of high school mathematics including solid geometry and

Symbols, abbreviations, off-campus class locations begin on page 401.

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 CSci 1100-1101 or CSci 3101. Students who believe they are eligible should contact Extension Counseling (373-3905).

**CSci 1100 INTRODUCTION TO FORTRAN PROGRAMMING I.** 2 degree credits, \$31.

Introduction to computer programming using FORTRAN; elementary-intermediate level applications. A choice of problems is provided to allow for students from different academic disciplines. (Prereq Math 1211 or 1311 or 1611 or  $\$$ . Informal lab)

**Fall Qtr** Sec 1 T—6-7:40, LindH 203

**CSci 1101 INTRODUCTION TO FORTRAN PROGRAMMING II.** 2 degree credits, \$31.

Continuation of 1100. Extended applications including some numerical methods. Not open for credit to CSci majors. (Prereq 1100. Informal lab)

**Spring Qtr** Sec 1 T—6-7:40, LindH 203

**CSci 3001 PERSPECTIVES ON COMPUTERS AND SOCIETY.** 4 degree credits, \$NSci 3201. \$62 plus \$4 special fee. Total \$66 ( $\diamond$ \$31 plus \$4 special fee. Total \$35)

The impact of computers on society. Partnership or confrontation. History of development. Potential for use. Computer utility. Privacy in a computer society. The future of computers. The ultimate machine. Computers in business, industry, art, music, the home. Meets concurrently with NSci 3201. (Prereq sophomore or  $\$$ )

**Spring Qtr** Sec 1 W—6-8:30, LindH 203, Schneider

**CSci 3101 A FORTRAN INTRODUCTION TO COMPUTER PROGRAMMING.** 4 degree credits, \$62 plus \$4 special fee. Total \$66.

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 Qtr** Sec 1 W—6-8:30, MinMet 116, Leavitt

**Winter Qtr** Sec 2 W—6-8:30, MinMet 116, Ibarra

**CSci 3105 FUNDAMENTALS OF ALGORITHMS AND LANGUAGES I** (replaces 1105). 4 degree credits, \$62 plus \$4 special fee. Total \$66.

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 Qtr** Sec 1 M—6-8:30, MechE 108, Frankowski

**CSci 3106 FUNDAMENTALS OF ALGORITHMS AND LANGUAGES II.** (replaces 1106). 4 degree credits, \$62 plus \$4 special fee. Total \$66.

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, algorithm's structures at the level of 3105 or  $\$$ ; informal lab)

**Spring Qtr** Sec 1 M—6-8:30, MinMet 116, Sahni

Symbols, abbreviations, off-campus class locations begin on page 401.

**CSci 3107 INTRODUCTION TO THE STRUCTURE AND PROGRAMMING OF COMPUTER SYSTEMS.** 4 degree credits, \$5101. \$62 plus \$4 special fee. Total \$66.

Organization and logical structure of computer systems. Representation of programs and data. Topics: number systems, primitive computer systems, programming in machine language. Extensions to more sophisticated systems, assembly language, sequencing, decision making, arithmetic, logical operations, character manipulation, iteration, sub-routines, data description, introduction to assembler software. (Prereq 1101 or 3101 or equivalent or §. Intended for CSci majors; nonmajors should take 5101. Informal lab.)

**Winter Qtr** Sec 1 Th—6-8:30, LindH 203, Frankowski

**CSci 5101 STRUCTURE AND PROGRAMMING OF SOFTWARE SYSTEMS I.** 4 degree credits, \$3107. \$68 plus \$4 special fee. Total \$72.

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. Intended for nonmajors; CSci majors should take 3107. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 Th—6-8:30, MechE 108, Weingart

**CSci 5102 STRUCTURE AND PROGRAMMING OF SOFTWARE SYSTEMS II.** 4 degree credits, \$68 plus \$4 special fee. Total \$72.

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, MechE 108, Franta

**CSci 5401 INTRODUCTION TO FORMAL LANGUAGES.** 4 degree credits, \$68 plus \$4 special fee. Total \$72.

Formal grammars and languages and their related automata. Language hierarchy. Context free languages and grammars. Pushdown automata. Normal form theorems. Operations on languages. Decidability and undecidability results. Parsing algorithms. Applications to programming. (Prereq 5400, informal lab. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 M—6-8:30, Aero 309, Ibarra

**CSci 5502 INTRODUCTION TO OPERATING SYSTEMS.** 4 degree credits, \$68 plus \$4 special fee. Total \$72.

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 W—6-8:30, MechE 108, Boyd

**CSci 5504 FORMAL METHODS IN COMPILER CONSTRUCTION.** 4 degree credits, \$68 plus \$4 special fee. Total \$72.

Syntax-directed approach to the "front end" of a compiler; review of finite state automata used by the lexical scanner; generative BNF grammars and their use in top-down parsing; boot strapping techniques; precedence schemes and languages; production of a table-driven efficient bottom-up parser. (Prereq 5401 and 5503, or §; informal lab. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 M—6-8:30, LindH 229, Maly

Symbols, abbreviations, off-campus class locations begin on page 401.

## counseling, chemical dependency

(See Chemical Dependency Counseling Certificate, page 383; Public Health and Industrial Relations courses)

## counseling and student personnel psychology (CSPP)

(Department of Psychoeducational Studies)

*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, \$51.

For persons whose professional work includes counseling and interviewing; not for certification as school counselor. Emphasis on counseling relationship and principles of interviewing; case studies, role playing and demonstration. **May not be taken S-N.** (No prereq. Limited to 35 students. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 T—7-9:30, Bu 125, Shaffer  
**Winter Qtr** Sec 2 M—7-9:30, Bu 125, Shaffer  
**Spring Qtr** Sec 3 M—7-9:30, Richfield HS 241, Shaffer (Limit 30 students)

### CSPP 5130 INTRODUCTION TO GUIDANCE. 3 degree credits, \$51.

Philosophy, principles, and practices in development and operation of pupil personnel services; role of counselor, teacher, principal, and specialized personnel; guidance techniques and case studies. **May not be taken S-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 W—6-8:30, Bu 120, Tennyson

### ★CSPP 5300 WORKSHOP: COUNSELING PSYCHOLOGY. 3 degree credits this offering (maximum 12 cr) \$51 each quarter.

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, primarily the MMPI; Spring: projective techniques; in the psychological assessment of adults.** **May not be taken S-N.** (Prereq 1. 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)

(See also Sociology; GC 1235, The Law in Society; and GC 3236, Minnesota Corrections: Penal Alternatives)

*Frederick Brown, Attorney*  
*John M. Callaway, Instructor in Criminal Justice Studies*

Symbols, abbreviations, off-campus class locations begin on page 401.

**CJS 5101 CRIMINAL LAW.** 4 degree credits, \$68.

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. May not be taken for graduate credit)

Winter Qtr Sec 1 M—8:20-8:50, AndH 310, Brown

**★CJS 5106 LAW AND SOCIAL ISSUES.** 4 degree credits, \$68.

An examination of how far the law can go in serving pressing social issues which also impinge on individual liberties such as sexual relations, drug use, abortion, family relations, etc. (No prereq. Limited to 45 students. May not be taken for graduate credit)

Spring Qtr Sec 1 TTh—7-8:40, RarigC 616, Callaway

## cross disciplinary studies

See course listings for:

**RELIGIOUS STUDIES**

**URBAN STUDIES**

**WOMEN'S STUDIES**



## danish

(See Scandinavian Languages)

## dentistry

For information on non-credit conferences or workshops in dentistry, please contact Dr. D. H. Foglesong, Continuing Education in Dentistry, 4 Owre Hall; telephone 373-7960.

## design (Dsgn)

Your attention is called to the Interior Design Certificate, page 381.

*Only courses which have 5 as the second digit may ordinarily be used in a degree program. Courses which have 4 as the second digit may be used as electives on degree programs or, where subject content is evaluated the same, they may meet degree requirements.*

*Richard Abell, Associate Professor of Interior Design*

*Mari Lynn Ampe, Teaching Assistant in Design*

Symbols, abbreviations, off-campus class locations begin on page 401.

*Sheila Anderson, Lecturer in Interior Design*  
*Harris Birkeland, Instructor in Interior Design*  
*Charlene Burningham, Instructor in Design*  
*Alexander Dekker, Architect*  
*Hans Dekker, Architect*  
*Gertrude Esteros, Professor and Head of Design*  
*Evelyn Franklin, Instructor in Design*  
*Benjamin Gingold, Lecturer in Interior Design*  
*Alice I. Goacher, Director and Associate Professor of Interior Design Certificate Program*  
*Maria Hanft, Lecturer in Interior Design*  
*Michael J. Hopkins, Design Consultant*  
*David H. Hozza, Lecturer in Interior Design*  
*Robert E. Kalbac, own practice*  
*Lynn Klein, Lecturer in Design*  
*Mary Litsheim, Lecturer in Design*  
*Glenn Miller, Interior Designer*  
*Virginia Nagle, Associate Professor of Design*  
*Joseph Ordos, Associate Professor of Design*  
*Phyllis Waggoner, Instructor in Design*

**Dsgn 0400C HOME DESIGN AND PLANNING.** 3 certificate credits, \$46.50 plus \$1 special fee. Total \$47.50.

Basic principles and elements of lifespace design and planning. Design criteria, values, and methods. Basic techniques of space programming and plan drawing. Discussion of site and interior design concepts of family living, building materials and methods, climate control, building restrictions, financing, and the relationship of these factors to lifespace planning. Relationship of the professions of architecture, building contracting, and real estate to the functional, aesthetic, and technological components of lifespace planning. Basic drafting equipment used. Actual projects assigned. (No prereq)

**Fall Sem** Sec 1 **T**—6:20-8, Arch 40

**★Dsgn 0437C CRAFTS MATERIALS.** 3 certificate credits, \$46.50.

Orientation to craft materials and techniques in non-textile crafts such as glass, metals, wood, plastic, others. Studio problems. Emphasis this term: stained glass. (No prereq. Limited to 24 students)

**new**

**Fall Sem** Sec 1 **M**—6:20-8, Jones 1, Blum

**★Dsgn 1426 CALLIGRAPHY.** 3 degree credits, \$46.50.

Calligraphy concepts, layout and page design, Italic and Gothic hands, and development of personal style, production of plates. Penwork concepts and the production of historic and contemporary leggerforms, forms of historic importance including those from great penmen such as Cersci, Vespiano and Albrecht Durer. (No prereq. Limited to 25 students)

**new**

**Fall Qtr** Sec 1 **W**—6:20-8:50, Arch 20, Skelton

**Winter Qtr** Sec 2 **W**—6:20-8:50, Arch 20, Skelton

**★Dsgn 1428 INTERIOR DESIGN LAYOUT.** 4 degree credits, \$62.

Organization and content of layouts for interior design. Experience in handling the tools and the materials and the use of design principles. Graphic communication through plan view, flat elevation, etc., and exploration of problem solving processes as helps in presenting ideas used in interior design. Emphasis on creative solution of interior design, layouts and development of the ability to visualize. (No prereq. Limited to 35 students)

**Fall Sem** Sec 1 **W**—6:20-8, WuH 240, Hopkins

**Spring Sem** Sec 2 **M**—6:20-8, WuH 240, Hopkins

Symbols; abbreviations, off-campus class locations begin on page 401.



**★Dgn 1450 DRAFTING—BASIC DRAFTING TECHNIQUES.** 4 degree credits, \$62 plus \$1 special fee. Total \$63.

Architectural drafting instruction in the use of drafting instruments. Emphasis on plans, elevations, details, and architectural symbols and vocabulary as related to Interior Design. (No prereq. Limited to 30 students)

- Fall Sem**    Sec 1    **M**—6:20-8:50, McNH 305, StP Campus, A Dekker
- Sec 2    **Th**—6:20-8:50, McNH 305, StP Campus, A Dekker
- Spring Sem**    Sec 3    **W**—6:20-8:50, McNH 305, StP Campus, A Dekker
- Sec 4    **Th**—6:20-8:50, McNH 305, StP Campus, A Dekker

**Dgn 1455 INTERIOR DESIGN I** (replaces 1555). 4 degree credits, \$62 plus \$3 special fee. Total \$65.

Introduction to the basic elements and principles of design and their use in the floor plans and elevations of residential interiors. Lectures include drafting, lettering, layout, furniture, selections, lighting and color. (No prereq)

- Fall Sem**    ★Sec 1    **M**—6:20-8, Jones 11, Anderson (Limit 50 students)
- Sec 2    **T**—6:20-8, McNH 305, StP Campus, Anderson
- Sec 3    **W**—6:20-8, Jones 11
- Sec 4    **M**—8:15-9:55, Jones 10
- Spring Sem** ★Sec 5    **M**—6:20-8, Jones 11, Anderson (Limit 50 students)
- Sec 6    **Th**—6:20-8, Jones 11

**Dgn 1456 INTERIOR DESIGN II** (replaces 1556). 4 degree credits, \$62 plus \$5 special fee. Total \$67.

An extension of the basic skills developed in Dgn 1455; also, a study of fabrics, their design fiber content, historic background and current trends; window treatments, their design, proportions and yardage; effective accessorization; further discussion on using colors creatively. Several sessions devoted to the demonstration and execution of watercolor rendering of elevations. One field trip. One talk by a professional designer. (Prereq 1455 or old 1555 and 3451.)

- Fall Sem**    Sec 1    **W**—6:20-8, Jones 10, Anderson
- Spring Sem**    Sec 2    **T**—6:20-8, Jones 10, Anderson

**★Dgn 1521 USE OF COLOR** (replaces 1420). 4 degree credits, \$62 plus \$4 course fee. Total \$66.

Study of color concepts and their applications to design. (No prereq. Limited to 25 students)



- Fall Sem**    Sec 1    **T**—6-9:45, McNH B3, StP Campus, Waggoner
- Sec 2    **W**—6-9:45, McNH B3, StP Campus, Klein
- Spring Sem**    Sec 3    **T**—6-9:45, McNH B3, StP Campus, Waggoner

**Dgn 1523 DRAWING AND DESIGN I.** 4 degree credits, \$62.

Development of basic skills in drawing for the designer. (No prereq)



- Fall Qtr**    Sec 1    **MW**—6:20-8:50, McNH 212, StP Campus, Ampe

**★Dgn 1525 TWO DIMENSIONAL DESIGN I.** 3 degree credits, \$46.50. (IS)

Experiments with principles of two-dimensional design. (No prereq. Limited to 24 students)

- Fall Qtr**    Sec 1    **TTh**—6:20-8:50, McNH 316, StP Campus, Klein

**Dgn 1531 SURFACE-FABRIC DESIGN.** 4 degree credits, \$62 plus \$14 course fee. Total \$76.

Exploration of surface pattern and composition with varied media and materials: dyeing, resist, batik, stencil, block printing and other. (No prereq)

- Spring Qtr**    Sec 1    **W**—6-10 and arr., McNH B9, StP Campus, Abell

**Dgn 1532 STRUCTURE FABRIC DESIGN I.** 4 degree credits, \$62 plus \$14 course fee. Total \$76.

Individual designing with loomed and non-loomed structural techniques; weaving, macrame, plaiting, stitchery and others. (No prereq)



- Fall Sem**    Sec 1    **W**—6-9:45, McNH 16, StP Campus, Burningham

Symbols, abbreviations, off-campus class locations begin on page 401.

**★Dagn 1533 METALSMITHING: INTRODUCTION TO TECHNIQUES.** 4 degree credits, \$62 plus \$14 course fees. Total \$76.

Introduction to techniques used in contemporary metalsmithing and jewelry-making. (Prereq 1525. Meets concurrently with 3533. Limited to 16 students)

**Fall Qtr** Sec 1 **Th**—6-10 and arr., McNH 10, StP Campus, Litsheim  
**Winter Qtr** Sec 2 **W**—6-10 and arr., McNH 10, StP Campus, Litsheim

**Dagn 3412 HISTORY OF TRADITIONAL FURNITURE** (replaces 3512). 4 degree credits, \$62 plus \$5 course fee. Total \$67.

Furniture from its earliest forms in Egypt through Art Nouveau in Europe with emphasis on the 17th through the 19th centuries in France, England, and the United States. Individual pieces of furniture as well as entire interiors placed within their historical settings showing their significance to the societies who developed and used them. Includes study of the Shaker, American Southwest, Spanish, Italian, Orient, antiquity, Middle Ages, Renaissance, and the Germanic nations. Availability of forms and use in contemporary interiors discussed. (No prereq)

**Spring Sem** Sec 1 **Th**—6:20-8, Jones 10, Hanft

**Dagn 3415 20TH-CENTURY INTERIORS AND FURNISHINGS.** 3 degree credits, \$46.50.

In-depth study of 20th century design for interiors and furnishings from Victorian to the present time. (No prereq)

**Winter Qtr** Sec 1 **M**—6:20-8:50, McNH 212, StP Campus, Nagle

**★Dagn 3450 PERSPECTIVE AND PRESENTATION SKETCHES** [replaces ArtS 1121]. 4 degree credits, \$62.

Instruction in the various methods of perspective, pencil techniques, shades and shadows, in plan and in perspective. Free-hand sketches of furnishings and details. Finished renderings in perspective for final presentation as related to interior design. (No prereq. Limited to 30 students)

**Fall Sem** Sec 1 **W**—6:20-8:50, McNH 316, StP Campus, A Dekker  
**Spring Sem** Sec 2 **M**—6:20-8:50, McNH 305, StP Campus, H Dekker  
Sec 3 **T**—6:20-8:50, McNH 316, StP Campus, A Dekker

**★Dagn 3451 INTERIOR DESIGN RENDERING.** 3 degree credits, \$46.50.

An approach to perspective rendering, use of colors as applied to rendering, the use of different media as well as developing a personal style of presentation. (No prereq. Limited to 25 students)

**Fall Sem** Sec 1 **W**—6:20-8, McNH 102N, StP Campus, Birkeland  
**Spring Sem** Sec 2 **Th**—6:20-8, McNH 102N, StP Campus, Birkeland

**★Dagn 3455 SEMINAR IN INTERIOR DESIGN.** (replaces 3555). 4 degree credits, \$62 plus \$5 special fee. Total \$67.

Advanced study of the elements and principles of spatial design and their direct functional and aesthetic relationships to color, lighting, fabric coordination, and kitchen planning. Class content will include lectures, discussion, visual aids, and one field trip. (Prereq 1456. Limited to 25 students. No auditors)

**Fall Sem** Sec 1 **T**—8:15-9:55, McNH 212, StP Campus, A Dekker

**★Dagn 3456 SEMINAR IN INTERIOR DESIGN.** (replaces 3556). 4 degree credits, \$62 plus \$5 special fee. Total \$67.

An intensive application, for advanced Interior Design projects, of the information and skills acquired in Dagn 3455. Class time will be used to study architectural symbols and their usage in Interior Design construction and professional project presentation; discussion in class with professional Interior Designers of experience; field trips to studios. The student will also have the opportunity to participate in an out-of-town trip to the Merchandise Mart in Chicago (not a course requirement). (Prereq 3455. Limited to 25 students. No auditors)

**Spring Sem** Sec 1 **T**—8:15-9:55, McNH 212, StP Campus, A Dekker

**Dagn 3457 INTERIOR DESIGN SPECIFICATIONS.** 3 degree credits, \$46.50.

Research, preparation, and implementation of the written specifications and

Symbols, abbreviations, off-campus class locations begin on page 401.

new

bidding documents necessary in the purchase of the materials for the interior environment. (Prereq basic core requirement and/or \$)

Spring Sem Sec 1 W—6:20-8, WuH 240, Hopkins

★Dsgn 3459 INTERIOR DESIGN BUSINESS. 3 degree credits, \$46.50.

Study of the operations that make up a small design business. These include physical plant, leasing, insurance, staff structure, fees and compensation, delivery of service, client-designer relationship, trade sources. (No prereq. Limited to 50 students)

Fall Sem Sec 1 Th—6:20-8, McNH 102N, StP Campus, Miller

Dsgn 3460-3461 INTERIOR DESIGN CLINIC (replaces 3560-3561). 4, 5 or 6 degree credits each semester. \$62, \$77.50 or \$93 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 ability to communicate within this framework. Experimental internship program on an individual basis with design studios; or individual problems related to individual student's needs in design. Contact instructor, Michael Hopkins at 331-9178. (Prereq \$ for 3460; 3460 or \$ for 3461)

Fall Sem 3460 Sec 1 Time arr., Hopkins

Spring Sem 3461 Sec 2 Time arr., Hopkins

Dsgn 3463 INTERIOR DESIGN: HOUSING AND THE URBAN ENVIRONMENT. [replaces Arts 3136]. 4 degree credits. \$62.

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, Arch 35, Hozza

Dsgn 3467 INTERIOR DESIGN: HOUSING, DYNAMICS AND POLICY [replaces Arts 3135]. 4 degree credits. \$62.

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, Arch 35, Hozza

★Dsgn 3477-3478 CONTRACT DESIGN SEMINAR (replaces 3577-3578). 4 degree credits each semester, \$62 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 1456 and 1428 or old 1556 and old 1528 or \$ for 3477; 3477 for 3478. Limited to 25 students)

Fall Sem 3477 Sec 1 M—6:15-8, WuH 240, Hopkins

Spring Sem 3478 Sec 2 M—8:15-9:55, WuH 240, Hopkins

★Dsgn 3533 METALSMITHING: FABRICATION. 4 degree credits, \$62 plus \$14 course fee. Total \$76.

new

Techniques of raising and forging and other non-casting techniques to create useful objects. (Prereq 1533. Limited to 16 students. Meets concurrently with 1533)

Fall Qtr Sec 1 Th—6-10 and arr., McNH 10, StP Campus, Litsheim

Winter Qtr Sec 2 W—6-10 and arr., McNH 10, StP Campus, Litsheim

★Dsgn 3536 METALSMITHING: ENAMELING. 4 degree credits, \$62 plus \$14 course fee. Total \$76.

new

Enamel used as surface decoration on metal jewelry or other useful objects. (Prereq 1533 or \$, some metals experience. Limited to 16 students)

Spring Qtr Sec 1 T—6-10 and arr., McNH 10, StP Campus, Litsheim

Symbols, abbreviations, off-campus class locations begin on page 401.

**★Dsgn 5561 HOUSING MANAGEMENT.** 5 degree credits, \$85.

Focus on new career demands for professionalism in housing management. Emphasis on increasing interpersonal skills. Includes historical perspectives, current status of housing, management approaches, psychosocial impact of housing and community design, specific residential populations. (Prereq #: A joint Day/Extension course limited to 12 Extension students. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 T—6:20-8:50, McNH 305, StP Campus, Franklin

**★Dsgn 5565 HOMES OF THE WORLD.** 3 or 4 degree credits, \$51 or \$68.

**new**

Study of home design in selected regions of the world. (Prereq 1551 or 1553 or 3563 or equiv. A joint Day/Extension class limited to 15 Extension students. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 TTh—4:15-5:30, McNH 212, StP Campus, Esteros

## **distributive education**

(See Vocational Education)

## **drug abuse**

(See Public Health)



## **east asian languages**

(See also Art History; History; and Pol 5454, Chinese Government and Politics)

*Edward M. Copeland, Professor of East Asian Languages*  
*Un Chol Shin, Instructor in East Asian Languages*

Language laboratory fees are charged for courses in which use of the lab is required or recommended. Cassette tapes are available to extension classes students on a take home basis. Students can pick up tapes at the Learning Resources Center on the second floor of Walter Library or the second floor of Temporary South of Coffey on the St. Paul Campus. Students must present a fee statement when checking out tapes. Rental costs are covered by the special fees paid with tuition.

Learning Resource Center hours are: 8 a.m.-10 p.m., Monday-Thursday; 8 a.m.-6 p.m., Friday; 9 a.m.-6 p.m., Saturday; Sunday hours being planned.

## **chinese (Chn)**

The following non-language classes may be applied toward the CLA foreign language requirement, Route II (see page 359); Arth 5765; EAL 1001.

**Chn 1005-1006 BEGINNING SPOKEN MANDARIN.** 3 degree credits each semester. To be offered 1977-78.

Symbols, abbreviations, off-campus class locations begin on page 401.

## japanese (Jpn)

The following non-language classes may be applied toward the CLA foreign language requirement, Route II (see page 359); ArH 5765; Hist 3471, 5471; Geog 3211, 5211; EAL 1001.

**Jpn 1005-1006 BEGINNING SPOKEN JAPANESE.** 3 degree credits each semester, \$46.50 plus \$5 course fee. Total \$51.50 each semester.

An introduction to modern spoken Japanese intended to provide the basic sentence patterns and vocabulary in Romanization necessary for development of conversational ability. (No prereq for 1005; 1005 or 6 for 1006)

**Fall Sem 1005** Sec 1 M—6:20-8, FoIH 304, Copeland

**Spring Sem 1006** Sec 2 M—6:20-8, FoIH 304, Copeland

## east asian languages (EAL)

**EAL 1001 EAST ASIAN HERITAGE.** 4 degree credits, \$62. (◆\$31)

An introduction to the cultures of China, Korea and Japan through a study of representative works of literature, art, music, religion and thought from prehistorical times to the present. Translations of poems, short stories, plays, novels, philosophical treatises and religious scriptures; recordings and slides will be the medium of instruction. (No prereq)

**Winter Qtr** Sec 1 T—6:20-8:50, FoIH 201

**EAL 1032 RELIGIONS OF EAST ASIA.** 4 degree credits, \$ReIS 1032. To be offered 1977-78.

## ecology and behavioral biology (EBB)

(See also Natural Science; Biology; and other environmental concerns courses, page 318)

*Eville Gorham, Professor of Ecology and Behavioral Biology*

**EBB 3001 INTRODUCTION TO ECOLOGY.** 4 degree credits, \$1003, 1004, 3004, Biol 1104, 3041. \$62. (IS)

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. (No prereq)

**Spring Sem** Sec 1 M—6:20-8:50, SciCB 175, Gorham

## economics (Econ)

(See also Hist 5341, 5342, American Economic History)

*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*

*Mary Supel, Lecturer in 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. \$62 each semester. (IS)

Principles underlying economic activity and the way these principles work out through our economic institutions. **1001:** Macro-economics: national income,

Symbols, abbreviations, off-campus class locations begin on page 401.

money and banking, economic growth. **1002:** Micro-economics: demand and supply, competition and monopoly, distribution of income, international trade, and current economic problems. (No prereq. Econ 1001 and 1002 may be taken in either order, or may be taken the same evening or the same term in order for the student to progress more rapidly to other courses. Each section limited to 35 students unless otherwise indicated)

#### CAMPUS

<b>Fall Sem</b>	<b>1001</b>	Sec 1	<b>M</b> —6-7:40, WuH 230, MurH 308 (Limit 70 students)	
		Sec 2	<b>M</b> —7:55-9:35, WuH 230, MurH 308	
		<b>1002</b>	Sec 3	<b>T</b> —6-7:40, ClaOff B25, StP Campus, Helmberger (Limit 70 students)
	Sec 4		<b>T</b> —7:55-9:35, BlegH 215, 235 (Limit 70 students)	
			Sec 5	<b>W</b> —6-7:40, BlegH 235, 135 (Limit 70 students)
			Sec 6	<b>Th</b> —6-7:40, BlegH 235, 130 (Limit 70 students)
			Sec 7	<b>Th</b> —7:55-9:35, BlegH 235
			Sec 8	<b>Sa</b> —8:15 a.m.-9:55, BlegH 235
<b>Spring Sem</b>	<b>1001</b>	Sec 9	<b>M</b> —7:55-9:35, ForH 115	
		Sec 10	<b>T</b> —6-7:40, BlegH 215, 260 (Limit 70 students)	
		Sec 11	<b>T</b> —7:55-9:35, BlegH 260	
		Sec 12	<b>W</b> —7:55-9:35, BlegH 210	
		Sec 13	<b>Th</b> —7:55-9:35, BlegH 255	
		Sec 14	<b>Sa</b> —10:10 a.m.-11:50, BlegH 255	
		<b>1002</b>	Sec 15	<b>M</b> —6-7:40, BlegH 115
	Sec 16		<b>T</b> —6-7:40, BlegH 115, 210 (Limit 70 students)	
	Sec 17		<b>Th</b> —6-7:40, BlegH 115	
	Sec 18		<b>Th</b> —7:55-9:35, BlegH 115	
	Sec 19		<b>Sa</b> —8:15 a.m.-9:55, BlegH 230	
	Sec 20		<b>M</b> —7:55-9:35, BlegH 115	
		<b>1002</b>	Sec 21	<b>T</b> —6-7:40, ClaOff B25, StP Campus, Helmberger (Limit 70 students)
	Sec 22		<b>T</b> —7:55-9:35, BlegH 115	
	Sec 23		<b>W</b> —6-7:40, BlegH 260	
	Sec 24		<b>Th</b> —6-7:40, BlegH 125	
	Sec 25		<b>Th</b> —7:55-9:35, BlegH 125	
	Sec 26		<b>Sa</b> —10:10-11:50 a.m., BlegH 230	

#### KELLOGG HIGH SCHOOL, LITTLE CANADA

<b>Fall Sem</b>	<b>1001</b>	Sec 27	<b>T</b> —6-7:40, room 237
	<b>1002</b>	Sec 28	<b>T</b> —8-9:40, room 237
<b>Spring Sem</b>	<b>1002</b>	Sec 29	<b>T</b> —6-7:40, room 237
	<b>1001</b>	Sec 30	<b>T</b> —8-9:40, room 237

#### RICHFIELD SENIOR HIGH SCHOOL

<b>Fall Sem</b>	<b>1001</b>	Sec 31	<b>M</b> —8:20-8, room 251-252
<b>Spring Sem</b>	<b>1002</b>	Sec 32	<b>M</b> —8:20-8, room 251-252

#### SANDBURG JUNIOR HIGH SCHOOL, GOLDEN VALLEY

<b>Fall Sem</b>	<b>1001</b>	Sec 33	<b>W</b> —6:20-8, room 209
	<b>1002</b>	Sec 34	<b>W</b> —8:15-9:55, room 209
<b>Spring Sem</b>	<b>1002</b>	Sec 35	<b>W</b> —6:20-8, room 209
	<b>1001</b>	Sec 36	<b>W</b> —8:15-9:55, room 209

Symbols, abbreviations, off-campus class locations begin on page 401.

**IRONDALE HIGH SCHOOL, NEW BRIGHTON**

**Fall Sem 1001** Sec 37 **M—7-8:40, room 105**  
**Spring Sem 1002** Sec 38 **M—7-8:40, room 105**

**NICOLLET JUNIOR HIGH SCHOOL, BURNSVILLE**

**Fall Sem 1001** Sec 39 **Th—7-8:40, room 226**  
**Spring Sem 1002** Sec 40 **Th—7-8:40, room 226**

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**

**Courses open to**

	<b>Econ Majors (Pre-requisites usually 3101, 3102)</b>	<b>Non-Majors (Pre-requisites Principles of Economics 1001, 1002)</b>
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. **To be offered 1977-78.**

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)

**Econ 5021 ECONOMICS, ETHICS, AND ECONOMIC PHILOSOPHY.** 3-5 degree credits, \$51, \$68 or \$85. (♦\$25.50)

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)

**Spring Sem** Sec 1 **Th—7:55-9:35, BlegH 420, Smith**

**Econ 5031 CURRENT ECONOMIC ISSUES.** 3-5 degree credits. \$51, \$68 or \$85. (♦\$25.50)

Current controversies over economic policies and problems that underlie the controversies. Selected topics, with some opportunity for selection by the students

Symbols, abbreviations, off-campus class locations begin on page 401.

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)

Fall Sem Sec 1 Th—7:55-9:35, BlegH 420, Smith

## economic theory

### ★Econ 3101 MICROECONOMIC THEORY. 4 degree credits, §3104. \$62.

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)

<b>Fall Sem</b>	Sec 1	M—6-7:40, BlegH 120
	Sec 2	T—6-7:40, BlegH 110, Simler
	Sec 3	T—7:55-9:35, BlegH 110
	Sec 4	W—6-7:40, BlegH 155, Richter
	Sec 5	W—7:55-9:35, BlegH 155, Richter
<b>Spring Sem</b>	Sec 6	T—6-7:40, BlegH 425
	Sec 7	W—6-7:40, BlegH 425, Richter
	Sec 8	W—7:55-9:35, BlegH 425, Richter

### ★Econ 3102 MACROECONOMIC THEORY. 4 degree credits, §3105. \$62. (IS)

Factors determining consumption, investment, national income, employment, and the price level. (Prereq 3101 or §. Limited to 35 students)

<b>Fall Sem</b>	Sec 1	T—7:55-9:35, BlegH 420, Simler
<b>Spring Sem</b>	Sec 2	M—6-7:40, BlegH 420, Simler
	Sec 3	M—7:55-9:35, BlegH 340, Simler

### Econ 3131 WELFARE ECONOMICS. 4 degree credits. To be offered 1977-78.

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 §)

### Econ 5141 BUSINESS CYCLES. 4 degree credits. Not offered 1976-77.

Ups and downs of business; causes of cycles; statistical data; relationship of cycles to economic growth, to inflation, and to politics. Methods of forecasting. Proposals for economic stabilization. (Prereq 3102, 3751 or equiv)

## development and area studies

### Econ 5301 and 5331 ECONOMIC DEVELOPMENT. 4 degree credits. Not offered 1976-77.

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. To be offered 1977-78.

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)

Symbols, abbreviations, off-campus class locations begin on page 401.



## international economics

### Econ 5401 and 5431 INTERNATIONAL ECONOMICS. 4 degree credits, \$68. (◆\$34)

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)

**Spring Sem** Sec 1 Th—6-7:40, BlegH 420, Smith

## labor economics

### Econ 3501 and 3551 LABOR ECONOMICS. 4 degree credits, \$62. (◆\$31.)

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—6-7:40, BlegH 420, Turnbull

(See also IR 3002, Modern Labor Relations)

### Econ 5534 ECONOMIC SECURITY. 4 degree credits. To be offered 1977-78 (IS).

Public and private approaches to problems of economic insecurity. Details of, and economic and social implications of private and public programs. Emphasis on economics of income and employment maintenance and stabilization rather than upon legal or administrative aspects of policy. (Prereq 3501 or §. Qualified students may register for graduate credit at the University of Minnesota)

### Econ 5537 LABOR MARKET BEHAVIOR AND REGULATION. 4 degree credits. To be offered 1978-79. (IS)

Public and private policies directed at regulation of employer-employee-union relations and labor market behavior. Settlement of disputes. Control of employer and union self-help techniques. Emphasis on economic rather than upon legal or administrative aspect. (Prereq 3551 or equiv or §. Qualified students may register for graduate credit at the University of Minnesota)

### Econ 5541 CONTEMPORARY LABOR ISSUES. 4 degree credits, \$68. (◆\$34)

The emphasis this semester is on problems and policies in the field of collective bargaining. (Prereq 3501 or equiv or §. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Sem** Sec 1 W—6-7:40, BlegH 125, Turnbull

## industrial organization

### Econ 3601 and 3651 INDUSTRIAL ORGANIZATION AND ANTI-TRUST POLICY. 4 degree credits, \$62. (◆\$31)

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—7:55-9:35, BlegH 125, Supel

### ★Econ 5611 ECONOMICS OF ENVIRONMENTAL CONTROL. 4 degree credits. To be offered 1977-78.

Pollution as an external diseconomy; use of taxes and subsidies to reduce pollution. Replenishable resources; maximum sustainable yield; role of the dis-

Symbols, abbreviations, off-campus class locations begin on page 401.

count 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)

(See other environmental concerns courses, page 318).

★**Econ 5621 ECONOMICS OF URBAN PROBLEMS.** 4 degree credits. **Not offered 1976-77.** 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)

## money and banking

**Econ 3751 MONEY AND BANKING.** 4 degree credits, \$62. (◆\$31) (IS)

◆ 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 †)

**Fall Sem** Sec 1 **Th**—6-7:40, BlegH 125, Smith

**Econ 3701 and 5701 MONEY, BANKING, AND MONETARY POLICY.** 4 degree credits. **To be offered 1977-78.**

Money creation; determinants and control of the money supply. Effects of various monetary transactions; elementary monetary theory. Economic role of banks, bank regulation. Tight and easy money; Federal Reserve policy. (Prereq 1001, 1002. **Not open to Econ majors**, who should take 3751, which is also offered alternate years. The courses meet concurrently but only one may be taken for credit. Qualified students may register for graduate credit for 5701 at the University of Minnesota)

## public finance

**Econ 3801 and 3851 ELEMENTS OF PUBLIC FINANCE.** 4 degree credits, \$62. (◆\$31)

◆ 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)

**Spring Sem** Sec 1 **M**—6-7:40, BlegH 425, Helmberger

## education

Persons interested in pre-education advising should discuss plans with an Extension counselor (373-3905). Students close to or ready to apply to the College of Education may be referred to the College of Education Career Development Office, 1425 University Ave. S.E., Minneapolis 55455 (373-2257), for further information, or directly to the Admissions Office (373-2155), for application. Most professional education courses must be taken in day school, when schools are in session for observation. However, all programs in the College of Education emphasize the preparation of the teacher in liberal education and in the teaching subjects. Many evening offerings listed in this bulletin may be taken by prospective teachers for later use toward degree programs in the College of Education.

**Teachers-in-Service:** Many courses in academic fields are available for teachers through evening Extension Classes registration. In addition to the professional education courses available through evening Extension Classes there are extensive offerings in the late afternoon and Saturday morning hours as part of the day school program of the College of Education. For the **Late Afternoon, Saturday**

Symbols, abbreviations, off-campus class locations begin on page 401.

**Morning, and Extension Bulletin**, contact the College of Education Career Development office, 1425 University Ave. S.E., University of Minnesota, Minneapolis, Minnesota 55455 (373-2257).

**Renewal of Teaching Certificates:** Former teachers wishing to renew certificates should check with the State Department of Education (296-4440) concerning their individual requirements. (See also PsyF 5305 WORKSHOP IN HUMAN RELATIONS)

Please see the following departmental listings for all College of Education course offerings:

## dept. of child psychology (page 96)

Introduction to Child Psychology, CPsy 1301  
 Topics in Child Psychology: Child's Environment, CPsy 1310  
 Infancy, CPsy 3302  
 Adolescent Psychology, CPsy 3303  
 Introduction to Maturity and Aging, CPsy 3304  
 Behavior and Emotional Problems, CPsy 3311  
 Psychology of Atypical Children, CPsy 3313  
 Processes of Socialization of Children, CPsy 3331  
 Children's Learning and Intellectual Skills, CPsy 3347  
 Adolescent Psychology, CPsy 5303  
 Topics in Child Psychology: Child's Environment, CPsy 5310  
 Behavioral and Emotional 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  
 Cognitive Development, CPsy 5343  
 Language Development, CPsy 5345

## dept. of psychoeducational studies

### **COUNSELING AND STUDENT PERSONNEL PSYCHOLOGY PROGRAM (page 108)**

Counseling Procedures, CSPP 5110  
 Introduction to Guidance, CSPP 5130  
 Workshop: Counseling Psychology, CSPP 5300

### **PSYCHOLOGY IN THE SCHOOLS TRAINING PROGRAMS (page 282)**

Seminar: Psychological Education, SchP 5550

### **SPECIAL EDUCATION PROGRAMS (page 332)**

Childhood Language Development: Classroom Implications, SpEd 5100  
 Education of Exceptional Children, SpEd 5101  
 Education of Learning-Disabled Children, SpEd 5112  
 Introduction to Mental Retardation, SpEd 5120  
 Education of Emotionally Disturbed and Socially Maladjusted Children, SpEd 5150  
 Education of The Disadvantaged, SpEd 5180  
 Workshop: Special Education, SpEd 5302

## dept. of curriculum and instruction

### **ART EDUCATION PROGRAM (page 75)**

Survey of Art Activities, ArEd 3001  
 Weaving Without a Loom, ArEd 3009  
 Introduction to Weaving, ArEd 3010

Symbols, abbreviations, off-campus class locations begin on page 401.

Puppetry, ArEd 3030

Art Media Techniques: Children's Artistic Development, ArEd 5001

Art Media Techniques: Art Appreciation, ArEd 5001

**MUSIC EDUCATION PROGRAM (page 239)**

Workshop: Music for Early Childhood, MuEd 5750

**SECONDARY EDUCATION PROGRAM (page 282)**

Family Life Education, SeEd 5112

Workshop: Curriculum, SeEd 5371

**educational administration (page 123)**

Workshop: Educational Administration, EdAd 5128

Formal Organizations in Education, EdAd 8201

Seminar: The Social Organization of Schools, EdAd 8218

Legal Implications of Acts by School Boards, Administrators and Teachers, EdAd 8224

**school of physical education,  
recreation and school health education**

**DIVISION OF PHYSICAL EDUCATION (page 247)**

Modern Dance, PE 1024

Karate, PE 1035

Paddleball-Raquetball, PE 1036

Nordic, Cross-Country Skiing, PE 1056

Volleyball, PE 1074

Modern Dance, PE 1124

Karate, PE 1135

Modern Dance, PE 1224

Water Safety Instructor, PE 1410

Officiating Soccer, PE 1657

Mechanics of Movement, PE 3111, 3111

Prevention and Care of Injuries, PE 3114

Organization and Management of Sport, PE 3143

Dance Therapy, PE 3181

Workshop: Dynamics of Therapeutic Dance/Movement, PE 5181

Practicum: Prevention and Care of Athletic Injuries, PE 5620

Workshop: Dance in Education, PE 5700

Swimming for Children, PE 0001

Springboard Diving for Boys and Girls, PE 0100

Golf, PE 0150

Swimming for Men and Women, PE 0250

Scuba for Men and Women, PE 0255

**RECREATION, PARK AND LEISURE STUDIES (page 277)**

Foundations of Outdoor Education, Rec 5300

Workshop: Contemporary Issues in Leisure Services, Rec 5900

**DIVISION OF SCHOOL HEALTH EDUCATION (page 281)**

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

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Symbols, abbreviations, off-campus class locations begin on page 401.

## dept. of social, psychological and philosophic foundations of education

### PSYCHOLOGICAL FOUNDATIONS (page 258)

Introductory Statistical Methods, PsyF 5110  
 Educational Measurement in the Classroom, PsyF 5120  
 Psychology and Pedagogy of Reading, PsyF 5148  
 Personality and Social Development, PsyF 5162  
 Social Psychology of Education, PsyF 5170  
 Structuring Learning: Social Psychological Approaches, PsyF 5172  
 Workshop in Human Relations, PsyF 5305

## vocational and technical education (page 341)

AGRICULTURE EDUCATION PROGRAM  
 BUSINESS EDUCATION PROGRAM  
 DISTRIBUTIVE EDUCATION PROGRAM  
 HOME ECONOMICS EDUCATION PROGRAM  
 INDUSTRIAL EDUCATION PROGRAM  
 VOCATIONAL EDUCATION PROGRAM

(See also ForP 5403, WOOD AND WOOD PRODUCTS; ForP 5405, PAPER IN TODAY'S WORLD; FR 5402, INTERPRETATION AND MANAGEMENT OF FOREST ENVIRONMENTS; FR 5403, FUNDAMENTALS OF NATURAL RESOURCE EDUCATION; Geog 5353, SEMINAR FOR IN-SERVICE TEACHERS; Geo 5051, PHYSICAL GEOLOGY FOR TEACHERS; Geo 5052, HISTORICAL GEOLOGY FOR TEACHERS; Hort 5020, HORTICULTURE TECHNIQUES FOR EDUCATION MAJORS; IC 0005, YOUR BRIGHT CHILD IN SCHOOL; Math 5005-5006, TOPICS IN THE MATHEMATICS OF PRIMARY SCHOOLS; Phil 5324, ETHICS AND EDUCATION; Soil 5022, BASIC SOIL SCIENCE FOR TEACHERS; Th 5131, CREATIVE DRAMATICS; WoSt 3910, SEXISM IN EDUCATION)

## educational administration (EdAd)

*Douglas R. Berdie, Lecturer in Educational Administration*  
*Ralph Mawdsley, Lecturer in Educational Administration*  
*Neal C. Nickerson, Jr., Professor of Educational Administration*  
*Samuel H. Popper, Professor of Educational Administration*

### EdAd 5128 WORKSHOP: EDUCATIONAL ADMINISTRATION. 3 degree credits, \$51.

Laboratory approach provides opportunities for experienced administrators to concentrate study on common administrative and supervisory problems. The aim of this workshop is to provide participants with the necessary knowledge and skills to understand the way survey research should be conducted. Participants will gain first-hand experience in writing questions, designing questionnaire formats, and working with data analysis techniques. Sessions will also discuss the reliability, validity, and generalizability of data obtained by using survey research techniques. Those who have taken this workshop will not only be able to conduct survey research but also will be able to critically evaluate results from surveys conducted by others. S-N grading optional. (Prereq practicing educational administrator or 7. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr      Sec 1    W—6:20-8:50, ClaOff 27, StP Campus, Anderson, Berdie

### EdAd 5128 WORKSHOP: EDUCATIONAL ADMINISTRATION. 3 degree credits, \$51.

Laboratory approach provides opportunities for experienced administrators to concentrate study on common administrative and supervisory problems. Teacher Evaluation: Samples of actual teacher evaluation policies and procedures will be analyzed for their contemporary appropriateness. Current suggestions from the

Symbols, abbreviations, off-campus class locations begin on page 401.

research and literature will be made available for use. Class members will create their own evaluation guide which will be applied through simulation, to specific situations. Films, cases and role-playing will be used in the simulation activities. In general, evaluation concepts will be translated into actual procedures which will be tested in the simulation laboratory. S-N grading optional. (Prereq practicing educational administrator or \$. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 2 **W**—6:20-8:50, ClaOff 27, StP Campus, Nickerson

**EdAd 8201 FORMAL ORGANIZATIONS IN EDUCATION.** 3 degree credits, \$69.

Focus on schools; organizations as social systems; individual behavior in organization roles; technical or production processes and management control systems. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 **T**—6:20-8:50, ClaOff 27, StP Campus, Popper

**EdAd 8218 SEMINAR: THE SOCIAL ORGANIZATION OF SCHOOLS.** 3 degree credits, \$69.

Structural components of school organization examined within the framework of social system theory; classifications of system properties and observation in operational contexts investigated by means of empirical models. (Prereq educational administration major or \$. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 **T**—6:20-8:50, ClaOff 27, StP Campus, Popper

**EdAd 8224 LEGAL IMPLICATIONS OF ACTS BY SCHOOL BOARDS, ADMINISTRATORS, AND TEACHERS.** 3 degree credits, \$69.

Constitutional, statutory, and common law bases of school administration; principles growing out of fundamental legal procedures. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 **W**—6:20-8:50, Bu 125, Mawdsley

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, Department of Education Administration, University of Minnesota, 225 Health Service Building, St. Paul, Minnesota 55108 or call (612) 373-5836.

## electrical engineering (EE)

Your attention is called to the Professional Development Recognition Program in Engineering and Science, page 127.

*Gale R. Allen, Control Data Corp.*

*Paul A. Cartwright, Professor of Electrical Engineering*

*Robert Cavins, Control Data Corp.*

*S.J. Lee, Control Data Corp.*

*Heh-Sen Lin, Medtronics, Inc.*

*Dave Lo, Staff Physicist, Univac*

*Robert Oswald, Principal Engineer, Univac*

*Dennis Prestholdt, Manager, Circuits Development, Control Data Corp.*

*Charles Tolman, Manager, Production Engineering, Univac*

Through registration in Extension Classes students in the basic program may earn all but approximately 12 credits towards a bachelor's degree in Electrical

Symbols, abbreviations, off-campus class locations begin on page 401.

**Engineering:** The degree may then be completed after a limited amount of day school attendance or through University-Industry Television for Education (UNITE). (See chart on page 367).

Your attention is called to the Undergraduate Development Certificate in Electrical Engineering—90 credits and 135 credits, page 396.

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 367)

**EE 0001 REFRESHER COURSE FOR ELECTRICAL ENGINEERS.** No credit. To be offered 1977-78.

**EE 1510 ELEMENTS OF ELECTRICAL ENGINEERING.** 5 degree credits, \$77.50.

Physical principles underlying the modeling of circuit elements. Two- and three-terminal resistive elements. Kirchhoff's laws. Simple resistive circuits. Linearity in circuits. Storage elements. First order circuits. (Prereq Phys 1291 or ¶Phys 1291, Math 3221)

**Spring Qtr** Sec 1 **Lect MW**—6-8:15, MechE 221  
**Lab M or W**—8:15-10:15, EE Labs

**EE 3010 CIRCUITS, SIGNALS AND SYSTEMS I.** 4 degree credits, \$62.

Modeling of lumped parameter networks. Second order circuits. Sinusoidal steady-state analysis. Two port networks. (Prereq 1510)

**Fall Qtr** Sec 1 **Lect T**—6-8:30, MechE 108. Rec arr.

**EE 3011 CIRCUITS, SIGNALS AND SYSTEMS II.** 4 degree credits, \$62.

Fourier methods of analysis. Laplace transforms and applications. Frequency and time domain responses. (Prereq 3010)

**Winter Qtr** Sec 1 **Lect T**—6-8:30, MechE 108. Rec arr.

**EE 3012 CIRCUITS, SIGNALS AND SYSTEMS III.** 4 degree credits, \$62.

Continuous, discrete-time systems. Feedback: stability, applications. (Prereq 3011)

**Spring Qtr** Sec 1 **Lect T**—6-8:30, MechE 108. Rec arr.

**EE 3050-3051 ELECTRONICS I-II.** 4 degree credits each quarter, \$62 each quarter.

**3050:** Diode circuits and applications. Semiconductor properties. P-N junctions. Junction diodes; JFET characteristics; MOSFET characteristics. FET amplifiers; biasing. **3051:** BJT characteristics. Biasing of BJTs. Low-frequency amplifiers; BJTs and FETs. Vacuum tubes. High-frequency amplifiers. Miller approximation; BJTs and FETs. (Prereq 3010-3011 or ¶3010-3011, ¶3400-3401 or § for 3050; 3050 for 3051)

**Fall Qtr** **3050** Sec 1 **Lect M**—6-10, MechE 102. Rec arr.

**Winter Qtr** **3051** Sec 2 **Lect M**—6-10, MechE 102. Rec arr.

**EE 3100-3101 ELECTROMAGNETIC FIELDS I-II.** 4 degree credits each quarter, \$62 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 ¶ with § for 3100; 3100 for 3101)

**Fall Qtr** **3100** Sec 1 **W**—Lect, Rec 6-10, MechE 202. Other rec arr.

**Winter Qtr** **3101** Sec 2 **W**—Lect, Rec 6-10, MechE 202. Other rec arr.

**EE 3400-3401 JUNIOR ELECTRICAL ENGINEERING LABORATORY.** 3 degree credits, \$46.50 plus \$10 special fee. Total \$56.50.

Experiments in circuits, electronics and electromagnetic fields. (Prereq ¶3050-3051)

**Fall Qtr** **3400** Sec 1 **Th**—6-9:45, ElectE labs

**Winter Qtr** **3401** Sec 2 **Th**—6-9:45, ElectE labs

Symbols, abbreviations, off-campus class locations begin on page 401.

**EE 3402 JUNIOR ELECTRICAL ENGINEERING LABORATORY.** 2 degree credits, \$31 plus \$10 special fee. Total \$41.

Experiments in circuits, electronics and electromagnetic fields. (Prereq 15050)

**Spring Qtr** Sec 1 **Th**—6-9:45, ElectE labs

**EE 5050 NONLINEAR ELECTRONIC CIRCUITS.** 4 degree credits, \$68.

Linear wave-shaping circuits. Piece-wise linear circuit analysis. Switching models of diodes and transistors. Transistor logic circuits. Bistable multivibrators. Astable multivibrators. Nearly sinusoidal oscillators. (Prereq 3051, 3012 or 13012. May not be taken for graduate credit)

**Spring Qtr** Sec 1 **Lect M**—6-10, MechE 102. Rec arr.

**EE 5051 INTRODUCTION TO LOGIC DESIGN.** 4 degree credits, \$68.

Integrated logic circuits. Piece-design using logic circuits, memory elements, sequential circuits. Transmission lines and digital signals. Video tape presentation with instructor. (Prereq 3041 or  $\$$ . May not be taken for graduate credit)

**Fall Qtr** Sec 1 **TTh**—6-8:30, ElectE 115

**EE 5052 LOGIC DESIGN LABORATORY.** 1 degree credit, \$17.

(Prereq 15051. May not be taken for graduate credit)

**Fall Qtr** Sec 1 Day school laboratory—register through Extension Classes. (2 hrs a week)

**EE 5055 LINEAR ELECTRONIC CIRCUITS.** 4 degree credits, \$68.

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. May not be taken for graduate credit)

**Winter Qtr** Sec 1 **Lect T**—6-8:30, ElectE 115

**Lect, Rec Th**—6-9:15, ElectE 115

**EE 5056 ELECTRONIC CIRCUITS LABORATORY.** 1 degree credit, \$17.

(Prereq 5055)

**Winter Qtr** Sec 1 Day School Laboratory. Register through Extension Classes (2 hours/week)

**EE 5100 ELECTROMAGNETIC FIELDS III.** 4 degree credits, \$68.

Plane-wave propagation, transmission lines, antennas, and other topics. (Prereq 3101. May not be taken for graduate credit)

**Spring Qtr** Sec 1 **W**—Lect and Rec 6-10, MechE 202. Other rec arr.

**EE 5101 ELECTROMAGNETIC FIELDS LABORATORY.** 1 degree credit, \$17.

(Prereq 3401 or 13401, 5100 or 15100. May not be taken for graduate credit)

**Spring Qtr** Sec 1 **W**—6-9, ElectE labs

**EE 5352 DESIGN: DIGITAL SYSTEMS.** 4 degree credits, \$68.

Structure of a digital system. Systematic design procedure. Clock and sequencer design and control. The digital computer. Video tape presentation with the instructor. (Prereq 5051, 5052 or  $\$$ . May not be taken for graduate credit)

**Spring Qtr** Sec 1 **Lect T**—6-8:30, EE 115

**Lect, Lab Th**—6-10:15, EE 115

**new**

Symbols, abbreviations, off-campus class locations begin on page 401.



## elementary education

A variety of courses and workshops in elementary education is available to local school districts which wish to jointly design continuing education experiences to meet local staff needs. Such offerings are limited only by the personnel resources of the College.

For further information about planning individually designed courses or workshops contact:

Director of Continuing Professional Education, Department of Curriculum and Instruction, 150 Peik Hall, University of Minnesota, Minneapolis, Minnesota 55455, Telephone: 373-3300.

## emergency services education

For information on noncredit conferences or workshops, contact Emergency Services Education, 3300 University Avenue S.E., Minneapolis, Minnesota 55414; telephone 373-4850.

## energy

(See environmental concerns courses, page 318)

## engineering

### **NEW PROGRAM AT THE POST-BACCALAUREATE LEVEL—PROFESSIONAL DEVELOPMENT RECOGNITION PROGRAM IN ENGINEERING AND SCIENCE**

This is a specialized program to meet the educational needs of the practicing engineer or scientist. The applicant identifies his professional development educational objectives for a two-year period. With a Professional Development advisor, he establishes a coherent program of study to meet his objectives. Upon completion, he is presented a citation documenting his work. Engineers and scientists may undertake several of these programs throughout their professional life times.

#### **ENGINEERING**

Extension Classes and the Institute of Technology offer regular IT classes in several areas of engineering. These are listed under Civil Engineering, I of T, Electrical Engineering and Mechanical Engineering. See also related science offerings in Chemistry, Computer Science, Mathematics and Physics.

#### **ENGINEERING REFRESHERS AND SPECIAL CLASSES.**

In addition to regular IT classes, Extension Classes and the Institute of Technology offer a number of refresher and noncredit special classes in engineering and science to meet the needs of the practicing engineer.

## **CONTINUING EDUCATION PROGRAMS IN ENGINEERING AND SCIENCE**

For students wishing to pursue extended coherent programs in engineering and science, several have been developed. Your attention is called to the Undergraduate Development Certificate series in Engineering and Science page 392, and the Professional Development Recognition Program in Engineering and Science (see below).

*Further details on programs listed above may be obtained by contacting the Director, Continuing Education in Engineering and Science, 11 Mines and Metallurgy, University of Minnesota, Minneapolis, Minnesota 55455; (612) 373-3132.*

Please see the following departmental listings for course offerings:

**AEROSPACE ENGINEERING AND MECHANICS**  
**CIVIL AND MINERAL ENGINEERING**  
**ENGINEERING ENGLISH (English)**  
**ENGINEERING GRAPHICS**  
**GEO-ENGINEERING**  
**INDUSTRIAL ENGINEERING/OPERATIONS RESEARCH**  
**INSTITUTE OF TECHNOLOGY**  
**MECHANICAL ENGINEERING**  
**METALLURGICAL ENGINEERING**

## **engineering graphics (EG)**

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

*Paul W. Bullen, Assistant Professor of Mechanical Engineering*

**EG 1025 ENGINEERING GRAPHICS.** 4 degree credits, \$62.

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**

Symbols, abbreviations, off-campus class locations begin on page 401.

## english (Engl)

Your attention is called to the Master of Arts in English, page 371.

*Chester Anderson, Professor of English*  
*Kent Bales, Associate Professor of English*  
*Michael Dennis Browne, Associate Professor of English*  
*Julie Carson, Assistant Professor of English*  
*Thomas S. Clayton, Professor of English*  
*Genevieve Esquire, Assistant Professor of English*  
*Edward M. Griffin, Associate Professor of English*  
*David Haley, Associate Professor of English*  
*Michael Hancher, Associate Professor of English*  
*Gordon Hirsch, Associate Professor of English*  
*J. Dennis Hurrell, Professor of English*  
*Onwuchekwa Jemie, Associate Professor of English*  
*Calvin Kendall, Associate Professor of English*  
*Archibald I. Leyasmeyer, Associate Professor of English*  
*John W. Lippert, Lecturer in English*  
*David Luke, Assistant Professor of English*  
*Andrew MacLeish, Professor of English*  
*Raymond McClure, Assistant Professor of English*  
*John McNally, Associate Professor of English*  
*J. Lawrence Mitchell, Associate Professor of English*  
*Thomas A. Nelson, Jr., Assistant Professor of English*  
*Charles Norman, Lecturer in English*  
*Gordon W. O'Brien, Professor of English*  
*Justin O'Connell, Lecturer in English*  
*Peter J. Reed, Associate Professor of English*  
*William Rosendahl, Professor of English*  
*Donald Ross, Jr., Associate Professor of English*  
*Robert Solotaroff, Associate Professor of English*  
*Martin Steinmann, Jr., Professor of English*  
*Charles J. Sugnet, Assistant Professor of English*

### **A MAJOR IN ENGLISH CAN BE COMPLETED IN THE EVENING.**

All courses required in the major are offered yearly. Interested students should discuss plans with an Extension counselor (373-3905). (See page 371 for information on a Master's degree in English).

### **B.A. Major Sequence**

Required Preparatory Course

One course selected from 1011-1030, introductory courses in British and American literature

### **Major Requirements**

Twelve courses in English or composition, 11 of which must be at the 3xxx and 5xxx levels; either 3241 or 3242, Shakespeare (A-N only); and six other courses—one in each of the following categories:

1) a course in the study of a literary genre; 2) a course in the intensive study of one or two writers; 3) a course in literary criticism or a course in language; 4) a course in the literature of the Middle Ages or Renaissance; 5) a course in American or English literature of the 17th or 18th centuries; 6) a course in American or English literature since 1800.

A list of courses identifying the requirements that each fulfills may be obtained from the Director of Undergraduate Studies, 204 Lind Hall (376-4653).

Symbols, abbreviations, off-campus class locations begin on page 401.

Each student electing to major in English will draw up a course of study in consultation with advisers when entering the program. Three courses within the major may be taken S-N. Students are encouraged to concentrate the remaining 5 electives within one area of study: for example, in a literature period, a genre (such as poetry, drama, novel), criticism, language, American literature, expository or creative writing. Students should confer with their advisers about what concentrations are likely to be useful preparation for their intended careers.

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

## composition (Comp) and communication (Comm)

Introductory Composition 1001 and Communication 1001 are being offered without prerequisite during the 1976-77 school year. Students who feel the need for a refresher course before enrolling in Composition 1001 or Communication 1001 are encouraged to take Composition 0001, Preparatory Composition, or Comp 0002C, Composition Grammar Review, if they feel their background in structure or grammar is insufficient, or American Studies 1101, 1102, 1103, American Life, if they feel their reading background has been neglected. Rhetoric 1147, Efficient Reading, and PO 1001, Personal Orientation, How to Study, will also be useful. Students with transfer credits in freshman English of less than 6 quarter or 3 semester credits (including credits from other colleges with the University of Minnesota) should contact the Continuing Education and Extension Counseling Office, 314 Nolte Center, 373-3905, for information as to their proper choice of courses.

Students with exceptionally high skills in English may earn exemption from the freshman English requirement by earning a very high score in the English placement test. Students interested in this alternative should contact the Counseling Office, 314 Nolte Center, 373-3905. A student who receives a grade of A in Comm 1001 should check with the communications department concerning possible exemption from 1002.

For other courses fulfilling freshman English requirement, see General College writing laboratory courses. See also Rhetoric.

### **Comp 0001 PREPARATORY COMPOSITION.** No credit, \$62. (IS)

Intensive drill on grammatical forms, structure, and theme writing. Recommended for those whose primary need is organization and development of themes. On instructor's recommendation, students may receive 4 credits in Introductory Composition. Inquiries should be directed to Extension Counseling. (No prereq)

**Fall Qtr**      Sec 1    **Th**—6:20-8:50, LindH 325

### **Comp 1001-1002 INTRODUCTORY COMPOSITION.** 4 degree credits each quarter, \$62 each quarter. (IS)

A two-quarter sequence offering extensive guided practice in the structural and stylistic features of exposition and argumentation. Not an introduction to literary studies or to humanities. Satisfies the freshman English requirement for most degree programs. (No prereq for 1001; 1001 for 1002)

#### **MINNEAPOLIS CAMPUS**

<b>Fall Qtr</b>	<b>1001</b>	Sec 1	<b>M</b> —6:20-8:50, MechE 212
		Sec 2	<b>T</b> —6:20-8:50, MechE 212
		Sec 3	<b>W</b> —6:20-8:50, MechE 212
		Sec 4	<b>Th</b> —6:20-8:50, MechE 212
		Sec 5	<b>Sa</b> —9 a.m.-11:30, MechE 212
<b>1002</b>	Sec 6	<b>T</b> —6:20-8:50, MechE 221	
	Sec 7	<b>W</b> —6:20-8:50, MechE 221	

Symbols, abbreviations, off-campus class locations begin on page 401.

<b>Winter Qtr</b>	<b>1001</b>	Sec 8	<b>M</b> —6:20-8:50, MechE 221
		Sec 9	<b>T</b> —6:20-8:50, MechE 221
		Sec 10	<b>W</b> —6:20-8:50, MechE 221
		Sec 11	<b>Th</b> —6:20-8:50, MechE 202
<b>1002</b>	Sec 12	<b>M</b> —6:20-8:50, MechE 212	
	Sec 13	<b>Th</b> —6:20-8:50, MechE 212	
	Sec 14	<b>Sa</b> —9 a.m.-11:30, MechE 221	
	Sec 15	<b>M</b> —6:20-8:50, MechE 212	
<b>Spring Qtr</b>	<b>1001</b>	Sec 16	<b>T</b> —6:20-8:50, MechE 212
		Sec 17	<b>W</b> —6:20-8:50, LindH 302
		Sec 18	<b>Th</b> —6:20-8:50, MechE 202
		Sec 19	<b>T</b> —6:20-8:50, MechE 221
<b>1002</b>	Sec 20	<b>W</b> —6:20-8:50, MechE 212	

#### SANDBURG JUNIOR HIGH SCHOOL, GOLDEN VALLEY

<b>Fall Qtr</b>	<b>1001</b>	Sec 21	<b>W</b> —6:20-8:50, room 205
<b>Winter Qtr</b>	<b>1002</b>	Sec 22	<b>W</b> —6:20-8:50, room 210

#### ST. PAUL CAPITOL COMPLEX

<b>Winter Qtr</b>	<b>1001</b>	★Sec 23	<b>T</b> —7-9:30, Civil Service Center (Limit 50 students)
<b>Spring Qtr</b>	<b>1002</b>	★Sec 24	<b>T</b> —7-9:30, Civil Service Center (Limit 50 students)

#### KELLOGG HIGH SCHOOL, LITTLE CANADA

<b>Fall Qtr</b>	<b>1001</b>	Sec 25	<b>T</b> —6:20-8:50, room 167-169
<b>Winter Qtr</b>	<b>1002</b>	Sec 26	<b>T</b> —6:20-8:50, room 167-169

#### NICOLLET JHS, BURNSVILLE

<b>Fall Qtr</b>	<b>1001</b>	★Sec 27	<b>W</b> —7-9:30, room 200 (Limit 50 students)
<b>Winter Qtr</b>	<b>1002</b>	★Sec 28	<b>W</b> —7-9:30, room 200 (Limit 50 students)

#### Comp 0002C GRAMMAR REVIEW. 3 certificate credits, \$46.50. (IS)

An intensive step-by-step review of grammar (parts of speech, inflections, syntax) punctuation, and spelling for those who want a "refresher" before going into other English courses or who feel the need of a basic course in the fundamentals of English usage; designed to develop the ability to compose correct and effective sentences. (No prereq)

<b>Fall Qtr</b>	Sec 1	<b>T</b> —6:20-8:50, LindH 229, O'Connell
<b>Winter Qtr</b>	Sec 2	<b>T</b> —6:20-8:50, LindH 305, O'Connell
<b>Spring Qtr</b>	Sec 3	<b>T</b> —6:20-8:50, LindH 305, O'Connell

#### Comp 0003C REVIEW OF BUSINESS ENGLISH. 3 certificate credits, \$46.50.

For those who have been out of school for a while or had poor preparation for business English while in school. Modern, streamlined sentence structure, paragraphing, punctuation and spelling. Brief introduction to letter form and organization. Emphasis on brevity, accuracy, meaning and vividness. (No prereq)

<b>Fall Sem</b>	Sec 1	<b>T</b> —6:20-8, LindH 215, Lippert
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#### Comp 0004C BUSINESS CORRESPONDENCE. 3 certificate credits, \$46.50.

A practical class for people recognizing the value of effective expression in business letters. The principal types of letters will be analyzed and the written assignments will emphasize the development of a letter style capable of producing economical, clear, action-getting letters. (No prereq)

<b>Fall Sem</b>	Sec 1	<b>Th</b> —6:20-8, LindH 215, Lippert
<b>Spring Sem</b>	Sec 2	<b>W</b> —6:20-8, LindH 215, Lippert
	Sec 3	<b>Th</b> —7-8:40, Brooklyn Center HS, Lippert

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**Comm 1001-1002, 1003 COMMUNICATION.** 4 degree credits each quarter, \$62 each quarter.

Emphasizes both theory and practice, intended to prepare the student to meet more effectively the various communicative demands in contemporary settings, to improve his capabilities in reading, writing, speaking and listening. **1001:** The process of communication; study of language and non-verbal means of communicating; clarity and appropriateness in expository discourse. **1002:** Deliberation, reasoning, non-logical appeals and ethical concerns in problem-solving and persuasive discourse. **1003:** Study of communicator, message, media, and social implications in mass communications. (Prereq 1001 for 1002, 1003. Comm 1001 and 1002 or 1001 and 1003 meet all requirements which are satisfied by Comp 1001-1002, Freshman Composition)

<b>Fall Qtr</b>	<b>1001</b>	Sec 29	T—6:20-9:50, Arch 5
		Sec 30	W—6:20-9:50, Arch 5
		Sec 31	Th—6:20-9:50, Richfield HS 141
<b>Winter Qtr</b>	<b>1001</b>	Sec 32	M—6:20-9:50, Ph 131
		<b>1002</b>	Sec 33 T—6:20-9:50, Arch 5
		Sec 34	Th—6:20-9:50, Richfield HS 141
<b>Spring Qtr</b>	<b>1001</b>	Sec 35	T—6:20-9:50, Arch 5
		<b>1002</b>	Sec 36 M—6:20-9:50, Arch 50
		<b>1003</b>	Sec 37 T—6:20-9:50, NH 213

**Comp 1027, 1028 INTERMEDIATE COMPOSITION.** 4 degree credits each quarter, \$62 each quarter. (IS 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 1001, 1002 or exemption)

<b>Fall Qtr</b>	<b>1027</b>	Sec 1	M—6:20-8:50, LindH 229
		Sec 2	W—6:20-8:50, LindH 203
<b>Winter Qtr</b>	<b>1027</b>	Sec 3	W—6:20-8:50, LindH 305
		<b>1028</b>	Sec 4 M—6:20-8:50, LindH 203
<b>Spring Qtr</b>	<b>1027</b>	Sec 5	Th—6:20-8:50, LindH 229

**\*Comp 1111 CREATIVE WRITING—POETRY.** 4 degree credits, \$62.

A course for those with some (not much) experience in writing poetry. Students' poems will be discussed. There will be numerous handouts and assignments, also a short reading list. (No prereq. Limited to 15 students)

<b>Winter Qtr</b>	Sec 1	T—6:20-9:30, LindH 303, Dennis Browne
<b>Spring Qtr</b>	Sec 2	T—6:20-9:30, LindH 303

**Comp 1113, 1114, 1115 AN INTRODUCTION TO CREATIVE WRITING.** 4 degree credits each quarter, \$62 each quarter.

An approach to creative writing for students who have not done a great deal of writing. Concentration on development of techniques. Course will proceed by definite assignments. **1113, 1114:** Short Story I and II. **1115:** Prose Pieces I. (No prereq)

<b>Fall Qtr</b>	<b>1113</b>	Sec 1	M—6:20-9:30, LindH 320
		Sec 2	Th—6:20-9:30, LindH 320
<b>Winter Qtr</b>	<b>1114</b>	Sec 3	M—6:20-9:30, LindH 320, Norman
		Sec 4	Th—6:20-9:30, LindH 320, Norman
<b>Spring Qtr</b>	<b>1115</b>	Sec 5	M—6:20-9:30, LindH 320, Norman

(See also noncredit Informal Writing Courses)

**Engl 0006C BASIC TECHNICAL WRITING I, II.** 3 certificate credits each semester, \$46.50 each semester.

Review of basic English and introduction to technical writing. Designed for people in the technical industries. Includes sentence design, spelling and punctuation. Covers basic techniques of definition, description, process, procedure, and analysis writing. Organization and correlation into text of tables, diagrams, illustrations. Emphasis on accuracy, brevity, simplicity, and layout. Prepares students to write simple reports, specifications, procedures, material for manuals, supervisory materials, and basic letters of a technical nature. (No prereq. Need not be taken in sequence)

**Fall Sem I** Sec 1 T—8:15-9:55, LindH 215, Lippert  
**Spring Sem II** Sec 2 W—8:15-9:55, LindH 215, Lippert

★**Comp 3030 IMAGINATIVE WRITING.** 3 degree credits, \$46.50 (maximum 12 cr—no topic may be repeated for cr)

An examination of the essential elements in creative writing. Discussion of the creative process in writing poetry, fiction, and drama and intensive practice in all three genres. Readings, discussion, and practice will include such topics as diction, structure, plotting, and dialogue. No examinations, but weekly assignments and a final portfolio. (No prereq. Limited to 25 students)

**Spring Qtr** Sec 1 T—6:20-8:50, LindH 215, Carson

**Comp 3031 TECHNICAL WRITING FOR ENGINEERING STUDENTS.** 4 degree credits, \$3085, \$62.

Focus on the form and style of Engineering writing in reports, documentation, and correspondence. Exercises and frequent practical examples, tied as much as possible to students' major fields. (No prereq)

**Fall Qtr** Sec 1 T—6:20-8:50, LindH 315

**Winter Qtr** Sec 2 W—6:20-8:50, LindH 315

**Comp 3101 INTERMEDIATE FICTION WRITING.** 4 degree credits, \$62.

Course for those with some experience in fiction writing. Discussion of students' works and set texts; assignments and experiments. (No prereq)

**Spring Qtr** Sec 1 M—6:20-9:30, LindH 303

**Comp 3104 INTERMEDIATE POETRY WRITING.** 4 degree credits, \$62.

Course for those with some experience in poetry writing. Discussion of students' works and set texts; assignments and experiments. (No prereq)

**Spring Qtr** Sec 1 T—6:20-9:30, LindH 229

**Comp 5107 WRITING OF NONFICTION.** 4 degree credits, \$68.

Writing of nonfiction prose forms. The article and critical review. (No prereq)

**Fall Qtr** Sec 1 T—6:20-9:50, LindH 303

(See also noncredit Informal Writing Courses)

## literature

(See other literature courses in Afro-American Studies, American Indian Studies, American Studies, Classics, French, General College, German, Humanities, Chicano Studies, Scandinavian Languages, Slavic Languages, South Asian Studies, Spanish, Women's Studies)

**Engl 1011 INTRODUCTION TO OLD AND MIDDLE ENGLISH LITERATURE: 650-1485.** 4 degree credits, \$62. (♦\$31)

Typical readings: *Beowulf*, Chaucer, ballads, *Gawain and the Green Knight*, *Everyman*. (No prereq)

**Fall Qtr** Sec 1 M—6:20-8:50, LindH 203, MacLeish

**Engl 1017 INTRODUCTION TO MODERN LITERATURE: POETRY.** 4 degree credits. \$62 (♦\$31) (IS)

Modern literature: poetry. (No prereq)

**Fall Qtr** Sec 1 Sa—9 a.m.-12:10, LindH 305, McNally

**Engl 1019 INTRODUCTION TO MODERN LITERATURE: DRAMA.** 4 degree credits, \$62. (♦\$31)

The course consists of readings in seven or eight important 20th century playwrights, beginning with the still controversial classic *A Doll's House* and ending with Genet's *The Balcony* or Peter Weiss' *Marat/Sade*. The class will proceed largely by discussion with the instructor providing reading questions and factual material. Students will write two or three short (2-3pp) papers and an essay final exam. (No prereq)

**Winter Qtr** Sec 1 M—6:20-8:50, LindH 215, Sugnet

Symbols, abbreviations, off-campus class locations begin on page 401.

**Engl 1020 INTRODUCTION TO LITERATURE: TOPICS.** 4 degree credits, \$62. (♦\$31)

Close study of famous "shorter" poems by famous English and American poets, ranging from the Renaissance to the present time. For example: Shakespeare, selected sonnets; Milton, "Lycidas"; Wordsworth, "Tintern Abby"; Keats, "Ode to a Grecian Urn"; Yeats, "Among School Children"; Eliot, *The Waste Land*. An introduction to the reading of poetry in general; also an introduction to poems basic to English and American culture. (No prereq)

**Spring Qtr** Sec 1 **Th**—6:20-8:50, LindH 215, Hancher

**Engl 1241 INTRODUCTION TO SHAKESPEARE.** 4 degree credits, \$62. (♦\$31)

An introductory survey of Shakespeare's major plays. Designed for the student who has not yet studied Shakespeare closely and wants to acquire a working familiarity with his dramas, his characters, and his language. Reading: 8-10 plays. Assignment: short exams and quizzes; final exam or optional term paper. (No prereq)

**Spring Qtr** Sec 1 **T**—6:20-8:50, LindH 315, Haley

**Engl 3111, 3112, 3113 SURVEY OF ENGLISH LITERATURE.** 4 degree credits each quarter, \$62 each quarter. (♦\$31 each quarter)

An historical survey of the major figures, movements, and trends in English literature. **3111:** From Chaucer to Marvell, including such figures as Spenser, Shakespeare, and Donne. **3112:** From Milton to Johnson, including such figures as Dryden, Swift and Pope. **3113:** From Blake to Yeats, including such authors as Wordsworth, Coleridge, Keats, Tennyson, and Browning. (No prereq)

**Fall Qtr** 3111 Sec 1 **T**—6:20-8:50, LindH 302, Rosendahl

**Winter Qtr** 3112 Sec 2 **T**—6:20-8:50, LindH 302, Kendall

**Spring Qtr** 3113 Sec 3 **T**—6:20-8:50, LindH 302, Rosendahl

**Engl 3241, 3242 SHAKESPEARE.** 4 degree credits each quarter, \$62 each quarter. (♦\$31 each quarter) (IS)

**3241:** Reading from Shakespeare's early and middle periods—*A Midsummer Night's Dream*, *Hamlet*, a history play, and three or four other plays. **3242:** Plays from the middle and later periods—all sections will read *King Lear*, *Macbeth*, *The Tempest*, three of four other plays. (No prereq)

**Fall Qtr** 3241 Sec 1 **W**—6:20-8:50, LindH 229, Clayton

**Winter Qtr** 3242 Sec 2 **W**—6:20-8:50, LindH 229, McClure

**Engl 3251 THE KING JAMES BIBLE AS LITERATURE.** 4 degree credits, \$62. (♦\$31)

The Old Testament and literary tradition. Readings in the historical narratives, prophets, psalms and wisdom literature. (No prereq)

**Fall Qtr** Sec 1 **M**—6:30-9:10, Cambridge HS, O'Brien

**Engl 3362 W.H. AUDEN & DYLAN THOMAS.** 4 degree credits, \$62. (♦\$31)

The works of Auden and Thomas, with emphasis on the major poetry. (No prereq)

**Fall Qtr** Sec 1 **T**—6:20-8:50, LindH 340, Reed

**Engl 3411, 3412, 3413. AMERICAN LITERATURE.** 4 degree credits each quarter, \$62 each quarter. (♦\$31) (IS)

Historical survey of important authors, intellectual currents, movements, conventions, genres, and themes. Lecture course with emphasis on wide reading. **3411:** Beginnings through Hawthorne. **3412:** Thoreau and Melville through James. **3413:** Crane through the 1930's. (No prereq)

**Fall Qtr** 3411 Sec 1 **Th**—6:20-8:50, LindH 340, Griffin

**Winter Qtr** 3412 Sec 2 **Th**—6:20-8:50, LindH 340, Ross

**Spring Qtr** 3413 Sec 3 **Th**—6:20-8:50, LindH 340, Griffin

**Engl 3455 AMERICAN SHORT STORY.** 4 degree credits, \$62. (♦\$31)

Historical examination of the American short story from the 18th century to the present. (No prereq)

**Fall Qtr** Sec 1 **T**—6:20-8:50, LindH 217, Steinmann

**Spring Qtr** Sec 2 **W**—6:20-8:50, LindH 229, Bales

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**Engl 3631 SATIRE.** 4 degree credits, \$62. (◆\$31)

The satiric tradition in English and American literature; the motives for and the uses, techniques, varieties, and results of satire. The role of the satirist, the social and historical basis for satire, the importance of comedy and the psychology of satire. Classical satire, contemporary song lyrics, and nonverbal forms—films, painting, cartoons. (No prereq)

**Spring Qtr** Sec 1 **W**—6:20-8:50, LindH 217, Leyasmeyer

**Engl 3851 THE ENGLISH LANGUAGE.** 4 degree credits, \$62. (◆\$31)

An informal, nontechnical examination of the English language in order to explore such basic questions as how you learned English, how your knowledge of it can be described, and what it has in common with other languages. (No prereq)

**Winter Qtr** Sec 1 **Th**—6:20-8:50, LindH 217, MacLeish

**Spring Qtr** Sec 2 **T**—6:20-8:50, LindH 340, Steinmann

**Engl 5151 18TH-CENTURY ENGLISH NOVEL.** 4 degree credits, \$68. (◆\$34)

Selected novels by such authors as Defoe, Richardson, Fielding, Smollett, Sterne, and Jane Austen. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 **M**—6:20-8:50, LindH 215, McClure

**Engl 5152 19TH-CENTURY ENGLISH NOVEL.** 4 degree credits, \$68. (◆\$34)

Selected novels from the Romantic and Victorian periods by such authors as Scott, Dickens, the Brontës, Thackeray, Eliot, and Hardy. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 **M**—6:20-8:50, LindH 54, Luke

**Engl 5153 20TH-CENTURY ENGLISH NOVEL.** 4 degree credits, \$68. (◆\$34) (IS)

Selected novels by such modern authors as Conrad, Ford, Joyce, Woolf, Lawrence, Forster, Sillitoe, Murdoch, Cary, and Waugh. Course will discuss major novelists and representative novels, and trends, themes, technical innovations, social influences and traditions evident in the British novel roughly from the turn of the century to about 1960. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 **M**—6:20-8:50, LindH 203, Reed

**Engl 5221 CHAUCER.** 4 degree credits, \$68. (◆\$34) (IS)

A reading of the *Canterbury Tales* and an introduction to Chaucer's language. This course is prerequisite to all other courses in Middle English Literature (5215-5222).

**Spring Qtr** Sec 1 **M**—6:20-8:50, LindH 302, Kendall

**Engl 5261 MILTON.** 4 degree credits, \$68. (◆\$34) (IS)

*Paradise Lost*, *Samson Agonistes*, minor poems, *Areopagitica*, and often, although not always, *Paradise Regained*. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 **W**—6:20-8:50, LindH 302, Haley

**Engl 5311 ROMANTIC WRITERS.** 4 degree credits, \$68. (◆\$34)

The poetry of Wordsworth and Keats. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 **T**—6:20-8:50, LindH 325, Luke

**Engl 5331 VICTORIAN WRITERS.** 4 degree credits, \$68. (◆\$34)

Charles Dickens, Thomas Carlyle, and Alfred Lord Tennyson were in their respective genres (the novel, prose nonfiction, and poetry) the most popular and influential writers of the early Victorian period. Their works express the characteristic Victorian conflicts between faith and doubt, between public and private selves, and between withdrawal and commitment. These conflicts and the writers' general critical analysis of the newly industrialized society of 19th-century England make them in many respects the first of the moderns. Students in the course will read

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some of the principal works of these Victorian "sages" and will write brief essays on two of these authors. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 W—6:20-8:50, LindH 325, Hirsch

**Engl 5361 POETRY OF W. B. YEATS.** 4 degree credits, \$68. (♦\$34)

(No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 M—6:20-8:50, LindH 325, Anderson

**Engl 5414 CONTEMPORARY AMERICAN LITERATURE.** 4 degree credits, \$68. (♦\$34)

The characteristic quality of contemporary (or "Post-Modernist") literature; significant ways in which it differs from earlier (largely "Modernist") American literature. Particular attention to: the sense of contemporary reality of some of our best novelists (Ellison, O'Connor, Pynchon, Bellow) and the ways that they try to capture that reality in *Invisible Man*, *Wise Blood*, *The Crying of Lot 49*, and *Herzog*, respectively; the two leading "schools" of contemporary American poetry—the "Confessional" represented by Lowell and Plath, and the "Projectivist" represented by Olson and Creeley; and to a poet who bridges both schools—Alan Ginsburg—and a work which tries to bridge fiction and non-fiction: Norman Mailer's *The Amies of the Night*. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 M—6:20-8:50, LindH 340, Solotaroff

**Engl 5451, 5452 AMERICAN NOVEL.** 4 degree credits each quarter, \$68 each quarter.

**5451:** through the 19th century. Typical authors: Cooper, Stowe, James, Hawthorne, Melville, Twain. **5452:** late 19th and 20th centuries. Typical authors: Dreiser, Cather, James, Hemingway, Fitzgerald, Faulkner. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** 5451 Sec 1 Th—6:20-8:50, LindH 303, Ross

**Winter Qtr** 5452 Sec 2 Th—6:20-8:50, LindH 303, Bales

**Engl 5593 BLACK WRITERS OF THE UNITED STATES.** 4 degree credits, \$68. (♦\$34)

Prose, poetry and drama, with emphasis on writers of the 20th-century. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 W—6:20-8:50, LindH 336, Jémie

**Engl 5597 CONTEMPORARY BLACK POETRY.** 4 degree credits, \$Afro 5597. \$68. (♦\$34)

Afro-American poetry since 1939, including Langston Hughes, Melvin Tolson, Robert Hayden, Gwendolyn Brooks, Amiri Baraka, Don Lee, Nikki Giovanni, Sonia Sanchez and The Last Poets. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 T—6:20-8:50, LindH 340, Jemie

**Engl 5610 TWENTIETH-CENTURY WRITERS.** 4 degree credits, \$68 each quarter. (♦\$34)

The novels of John Fowles (*The Magus*, *The Collector*, *The Ebony Tower*). The plays of Harold Pinter and Tom Stoppard, and (perhaps) the criticism of Susan Sontag and George Steiner. The craft of writing and the relationship between imagination and "Reality." May be repeated for credit. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 W—6:20-8:50, LindH 4, Hurrell

**Engl 5651 TECHNIQUES OF POETRY.** 4 degree credits, \$68. (♦\$34)

Analysis of poetry; form and sound; meter, stanza, euphony, free verse. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 M—6:20-8:50, LindH 215, McNally

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**Engl 5815 HISTORY OF ENGLISH LANGUAGE.** 4 degree credits, \$68. (◆\$34)

◆ The development of the English language from Old to Early Modern English: phonology, morphology, and syntax. (Prereq Engl 5851 or †. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 T—6:20-8:50, LindH 320, Mitchell

**Engl 5831 AMERICAN ENGLISH.** 4 degree credits, \$68. (◆\$34)

◆ History of the English language in the United States; significant regional variation. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 T—6:20-8:50, LindH 320, Carson

**Engl 5851 STRUCTURE OF MODERN ENGLISH.** 4 degree credits, \$68. (◆\$34)

◆ Survey of modern English grammar dealing with English phonology, syntax, and semantics; variations and change in English. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 T—6:20-8:50, LindH 4, Escure

**Engl 5910 PLAYS OF THE GUTHRIE SEASON.** 4 degree credits, \$68. (◆\$34)

◆ This course will study the plays offered by the Guthrie Theatre in the 1976-77 season in both the main and the second theaters. It will examine the plays as literature, the process of staging, and the final productions. Attending the performances is a course requirement. (No prereq)

**Fall Qtr** Sec 1 W—6:20-8:50, LindH 217, Leyasmeyer

**Engl 5940 SHAKESPEARE: INTENSIVE STUDIES OF SELECTED PLAYS.** 4 degree credits, \$68. (◆\$34)

◆ Intensive study of three or four plays. Some previous study of Shakespeare helpful but not required. Advance inquiry from prospective students in welcomed. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 T—6:20-8:50, LindH 325, Clayton

**Engl 8240 SEMINAR: SHAKESPEARE.** 4 degree credits, \$92.

◆ Shakespearean tragedy. (Prereq †. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 M—6:20-8:50, LindH 302, O'Brien

**Engl 8690 SEMINAR: STUDIES IN DRAMA.** 4 degree credits, \$92.

◆ A study of eight or nine plays, of all types and periods, which present interesting problems in dramatic techniques or aesthetics. (Prereq †. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 W—6:20-8:50, LindH 215, Hurrell

**family planning administration (FPAd)**

(See also Hist 1310, The Family in American History)

*Harry Foreman, M.D., Director of Population Studies*

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**FPA 5243 TOPICS IN FAMILY PLANNING.** 2-5 degree credits, \$34-\$85.

Independent study relating to various aspects of family planning programs. (Prereq  $\$$ . [HSci Unit A 12-176, U of M, 373-9695]. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr**      Sec 1      Arr. Foreman

**Winter Qtr**    Sec 2      Arr. Foreman

**Spring Qtr**    Sec 3      Arr. Foreman

## family social science (FSoS)

(See also College of Home Economics; General College home life courses; Hist 1310, The Family in American History; IC 0034, Family Communications: What are Your Rules; Soc 3501, The Family System; SeEd 5112, Family Life Education)

*Gerald Carlson, Instructor in Family Social Science*  
*Faye Caskey, Instructor in Family Social Science*  
*Patrick Doyle, Instructor in Family Social Science*  
*Geraldine Gage, Professor of Family Social Science*  
*James Hawkins, Associate Professor in Family Social Science*  
*Richard Hey, Professor of Family Social Science*  
*John Kokosh, Assistant Professor of Family Social Science*  
*Sally Kraska, Instructor in Family Social Science*  
*Gerhard Neubeck, Professor of Family Social Science*  
*Anne Nevaldine, Instructor in Family Social Science*  
*Elizabeth Peterson, Associate Professor of Family Social Science*  
*Gail Thoen, Assistant Professor of Family Social Science*

**★FSoS 1001 DYNAMICS OF DATING, COURTSHIP, AND MARRIAGE.** 3 degree credits, \$3001. \$46.50 plus \$1 special fee. Total \$47.50. (♦\$23.25 plus \$1 special fee. Total \$24.25) (IS)

This course is designed to assist individuals seeking self-understanding, mutually satisfying interpersonal relations, happy marriage, and successful parenthood. These personal goals are worked toward through discussion and study about: personal growth and maturity; desirable mate qualities and selecting a marriage partner; purposes and problems of dating, courtship and engagement; family philosophy, religion, values and planning; early marriage adjustments, child training and discipline, sex education, income management, problem solving, and decision making. Integral parts of the course are: case studies, movies, and student discussion. Students are invited for discussion and personal or family counseling with the instructor. (No prereq.)

**Fall Qtr**      Sec 1      T—7-9:30, Irondale HS 105, New Brighton (Limit 40 students)

**Winter Qtr**    Sec 2      T—7-9:30, Brooklyn Center HS 12, Portner  
(Limit 50 students)

**★FSoS 1002 DYNAMICS OF MARRIAGE AND PARENTHOOD.** 3 degree credits, \$1001. \$46.50 plus \$1 special fee. Total \$47.50. (♦\$23.25 plus \$1 special fee. Total \$24.25)

This course is designed to help individuals and couples achieve understanding of self and others, happiness in marriage, and success as parents. It focuses upon husband-wife and parent-child relations, with individual development and family unity as specific goals. These are worked toward through discussion and study of such important and practical issues as: self-analysis, developmental tasks, team decision-making and problem solving, family philosophy, religion, values, and planning; child training and discipline, sex education, communication, income management, marriage adjustments regarding money, sex, in-laws, and children, etc., and general dynamics of family interaction. Integral parts of the course are: case studies, movies, and student discussion. Students are invited for discussion and personal or family counseling with the instructor. (Prereq engaged or married students)

**Fall Qtr**      Sec 1      M—7-9:30, St. Stephens Church 109, WStP; Doyle  
(Limit 30 students)

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- Winter Qtr** Sec 2 T—7-9:30, Irondale HS 105, New Brighton; Carlson  
(Limit 40 students)
- Spring Qtr** Sec 3 Th—7-9:30, Minnetonka HS 119, Portner (Limit 40 students)

◆ **★FSoS 1025 PARENTHOOD.** 3 degree credits, \$46.50. (◆\$23.25)

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 T—7-9:30, Brooklyn Center HS 12, Caskey (Limit 50 students)
- Spring Qtr** Sec 2 T—7-9:30, Southwest HS 9, Mpls; Thoen (Limit 60 students)

**★FSoS 5001 HUMAN SEXUAL BEHAVIOR.** 4 degree credits, \$68. (IS)

The nature of sexual functioning, sexual development, ethics, and attitudes, research problems. (Prereq 15 credits in psychology or sociology. Limited to 50 students. Qualified students may register for graduate credit at the University of Minnesota)

- Winter Qtr** Sec 1 W—6:20-8:50, BlegH 240, Kraska
- Spring Qtr** Sec 2 W—6:20-8:50, BlegH 120, Nevaldine

**FSoS 5025 PARENTING.** 4 degree credits, \$68. (◆\$34)

 This course examines a number of parenting methods while concurrently focusing on the child's development from infancy through adolescence. Students are enabled to identify differing parenting techniques, to develop their own parenting approach, and to conduct parenting classes. (Prereq 5200 or 5202, CPsy 1301. Qualified students may register for graduate credit at the University of Minnesota)

- Spring Qtr** Sec 1 T—6:20-8:50, Sandburg JHS 204, Golden Valley; Fowler

**FSoS 5200 FAMILY RELATIONSHIP.** 5 degree credits, \$Soc 5501. \$85.

Analysis of the family as an institution and system of relationships. Survey of current developments in the study of the family. Analysis of changes in American society and their influences on family life. (Prereq Psy 1001 or equiv, Soc 1001 or equiv. Qualified students may register for graduate credit at the University of Minnesota)


- Fall Qtr** Sec 1 W—6:20-8:50, McNH 103N, StP Campus, Hawkins

**FSoS 5219 PROBLEMS IN FAMILY FINANCIAL MANAGEMENT.** 3-4 degree credits, \$51-\$68.

 The analysis of financial management processes, and modification of management behavior by application of behavioral techniques. (Prereq 3260, or 5260, 3001 or 3. Qualified students may register for graduate credit at the University of Minnesota)

- Fall Qtr** Sec 1 TTh—3:15-5, NorH 317, StP Campus, Gage

**★FSoS 5240 SPECIAL TOPIC: DEVELOPMENTAL STAGE THEORY.** 3 degree credits, \$51.

 Theoretical and conceptual models of psychological stage theory developed by Piaget, Kohlberg, Dabrowski, Piechowski, Rodgers, and Briskin as they apply to individual and family development. The main focus will be on the conceptual models and clinical applications of stage theory to children, adolescents, older adults, and cross-age groups. (Prereq grad, professional, or undergrad standing; 9 cr in psychology or equiv. A joint Day/Extension class limited to 20 Extension students [plus day school registrants]. Qualified students may register for graduate credit at the University of Minnesota)

- Spring Qtr** Sec 1 M—4:30-6:45, NorH 317, StP Campus, Briskin

For information on non-credit conferences or workshops in Family Social Science, please contact the Department of Conferences and Institutes, 131 Nolte Center for Continuing Education (373-3151).

For information on off-campus credit courses in Home Economics areas, please call or write College of Home Economics, University of Minnesota, St. Paul, Minnesota 55108 (373-0935).

Symbols, abbreviations, off-campus class locations begin on page 401.

# finance (BFin)

Your attention is called to the Credit and Financial Management Certificate program, page 388.

*Mary L. Bochnak, Lecturer in Finance*

*James Bowditch, Lecturer in Finance*

*E. Norman Eck, North Central Credit & Finance Management Assoc.*

*M. Claire Canavan, Lecturer in Finance*

*James M. Gahlon, Lecturer in Finance*

*Printice L. Gary, Jr., Lecturer in Finance*

*Larry Gru, Lecturer in Finance*

*Diane D. Knox, Lecturer in Finance*

*George A. Mairs, III, Vice President, Treasurer, Director, Mairs & Power, Inc.*

*John Matyi, Lecturer in Finance*

*John Schreiner, Associate Professor of Finance*

*Dennis L. Senneseth, Lecturer in Finance*

*Thomas W. von Kuster, Jr., Lecturer in Finance*

**★BFin 0001C INTRODUCTION TO INVESTMENTS.** 3 certificate credits. \$46.50.

A fundamental course for adult investors who wish a general background of information on the investment field. Classroom instruction supplemented by special lectures by experienced people 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. Limited to 45 students)

**Fall Sem** Sec 1 T—6:20-8, NH 209, Mairs

**Spring Sem** Sec 2 W—6:20-8, BlegH 255, Matyi

**BFin 0002C CREDIT AND FINANCIAL MANAGEMENT PROBLEMS.** 3 certificate credits.  
To be offered 1977-78.

Analyzing and solving specific case problems using advanced Credit and Financial Management Techniques. Emphasis is placed on the proposal and support of realistic decisions and courses of action. (Prereq Acct 3160, Mktg 0087C or 8)

**★BFin 3000 FINANCE FUNDAMENTALS.** 4 degree credits. \$62.

Provides students with a comprehensive, analytical introduction to the principal concepts in Finance. After considering the general business environment, the course examines valuation theory. Then financial management decisions concerning uses and sources of funds are presented, thus introducing students to capital budgeting. The course concludes by surveying the nation's financial markets. (Prereq Acct 1051 or 1026. May not be taken S-N. Limited to 35 students)

**Fall Qtr** Sec 1 M—6-9, BlegH 420, Bochnak

Sec 2 M—6:30-9:30, Kellogg HS 168-170, Little Canada; Bowditch

Sec 3 T—6-9, BlegH 115, Matyi

Sec 4 W—6-9, BlegH 430, Knox

Sec 5 W—6-9, RarigC 616, Canavan

Sec 6 Th—6-9, BlegH 205

**Winter Qtr** Sec 7 T—6:30-9:30, Sandburg JHS 205, Golden Valley, Schreiner

Sec 8 T—6-9, BlegH 340, Gru

Sec 9 M—6:30-9:30, Richfield HS 145, Gary

Sec 10 Th—6-9, BlegH 335, Gahlon

**Spring Qtr** Sec 11 M—6-9, BlegH 210, Canavan

Sec 12 M—6:30-9:30, Kellogg HS 168-170, Little Canada; Bowditch

Sec 13 T—6-9, BlegH 105, Bochnak

Sec 14 W—6-9, BlegH 205

Sec 15 Th—6-9, BlegH 105, Senneseth

Symbols, abbreviations, off-campus class locations begin on page 401.

★BFin 3300 **INVESTMENT MANAGEMENT.** 4 degree credits, \$0001C. \$62.

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, BlegH 260

**Spring Qtr** Sec 2 **Th**—5:30-8, BlegH 340, von Kuster

★BFin 8100 **FINANCIAL MANAGEMENT.** 4 degree credits, \$3100. \$92.

Rigorous case-oriented course which simulates executive-level discussion of corporate financial policy. The student is challenged to apply basic principles of finance on his or her own initiative. Effective verbal and written communication stressed. Case discussions augmented by written assignments, lectures, readings, and occasional guest presentations by financial executives. (Prereq 8000 or 3000. Limited to 30 students who must be enrolled in Part II of the EMBA program of the Graduate School of Business.)

**Fall Qtr** Sec 1 **T**—5:30-8, BlegH 330, Schreiner

**new**

## food science and nutrition (FScN)

(See also Home Economics; GC 3116, Nutrition: Foods, Its Uses and Abuses; and Phcg 1800, Nature's Remedies)

*Paul B. Addis, Professor of Meat Science*

*C. Eugene Allen, Professor of Meat Science*

*Francis F. Busta, Professor of Food Microbiology*

*Betty R. Carruth, Assistant Professor of Nutrition*

*Eugenia P. Davis, Assistant Professor of Food Chemistry*

*Margaret D. Doyle, Professor of Nutrition*

*P.V.J. Hegarty, Associate Professor of Nutrition*

*Larry L. McKay, Associate Professor of Food Microbiology*

*Howard A. Morris, Professor of Dairy and Food Technology*

*Gary A. Reineccius, Associate Professor of Food Chemistry*

*Eugene H. Sander, Associate Professor of Food Process Engineering*

*O.P. Snyder, Jr., 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, Associate Professor of Nutrition*

*Joseph J. Warthesen, Assistant Professor of Food Chemistry*

*Isabel D. Wolf, Instructor in Food Science and Nutrition*

*Edmund A. Zottola, Professor of Food Microbiology*

**IC 0015 CURRENT ISSUES IN NUTRITION: FALLACIES AND FACTS.** No credit. Hegarty. See Informal Courses, page 200.

★FScN 1030 **UNDERSTANDING CHEESE.** 2 degree credits, \$31 plus \$5 course fee. Total \$36.

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 **Th**—6:30-8, FScN 15, STP Campus, Morris

Symbols, abbreviations, off-campus class locations begin on page 401.

★FScN 1215 **HOME PRESERVATION OF FOODS.** 2 degree credits, \$31 plus \$5 course fee. Total \$36.

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 W—6:30-8, MSciL 125, StP Campus, Zottola, Wolf

FScN 1500 **MEAT SCIENCE.** 4 degree credits, \$62 plus \$5 course fee. Total \$67.

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 §)

Fall Qtr Sec 1 T—6:20-10, MSciL 125, StP Campus, Allen

FScN 1600 **SOCIOCULTURAL ASPECTS OF NUTRITION.** 3 degree credits, \$46.50. (♦\$23.25)

Food habits of man in terms of historical, social, and cultural perspectives. Influence of different food patterns on nutritional status. (No prereq)

Spring Qtr Sec 1 Th—6:30-9, FScN 15, StP Campus, Doyle

FScN 1603 **FAMILY NUTRITION.** 2 degree credits, \$31. (♦\$15.50)

Basic concepts in nutrition, emphasizing interrelationships between nutrients and the human requirement for specific nutrients. Discussion on current controversial nutrition topics. (No prereq)

Fall Qtr Sec 1 M—6:30-8, FScN 15, StP Campus, Hegarty

FScN 3110 **FOOD CHEMISTRY.** 3 degree credits—lecture only—\$46.50. 5 degree credits, \$77.50 plus \$10 course fee—lecture and lab—Total \$87.50.

Chemical properties of foods and food constituents as influenced by processing and storage. (Prereq BioC 1302 or §)

Fall Qtr Sec 1 Lect W—6:30-9, MSciL 125, StP Campus, Reineccius

★Sec 2 Lect and Lab WTh—6:30-10, MSciL 135, StP Campus, Reineccius, Warthesen (Limit 60 students)

FScN 3123 **MICROBIOLOGY OF FOODS.** 5 degree credits, §MicB 3103, VB 3103, \$77.50 plus \$10 course fee. Total \$87.50.

Incidence and sources of microorganisms in foods. Principles involved in the control of microorganisms in foods for prevention of spoilage and public health hazards. Enhancement of keeping quality, nutritive and flavor attributes of food by the activities of microorganisms, as found in the manufacture of cheese or other fermented food products. Principles involved in sanitation and destruction or inhibition of growth of microorganisms through use of physical and chemical agents. (prereq Biol 1011 and 10 cr college chemistry, or 1020 or §; not for majors in food science and technology, where 5120, 5122, 5123 required)

Winter Qtr Sec 1 Lect and Lab TTh—6:20-9:30, MSciL 222, FScN 218, StP Campus, Tatini

FScN 3642 **COMMUNITY NUTRITION.** 3 degree credits, \$46.50.

Nutrition and health practices of the family in the community; concepts and methodologies for nutrition education. (Prereq jr, 1602 or equiv, 6 cr of psychology, sociology, anthropology or economics)

Winter Qtr Sec 1 M—6:30-9, MSciL 125, StP Campus, Carruth

FScN 3762 **HOSPITALITY FINANCIAL MANAGEMENT.** 4 degree credits, \$62.

Financial management and forecasting applied to the hospitality industry. (Prereq 3760, 4 cr Statistics or §)

Fall Qtr Sec 1 W—6:20-9:30, ClaOff B30, StP Campus, Snyder

Symbols, abbreviations, off-campus class locations begin on page 401.



**FScN 5111 INDEPENDENT STUDY IN FOOD SCIENCE AND NUTRITION.** 1-5 degree credits, \$17-\$85.

Individual laboratory or library research in some area related to food chemistry; food processing, nutrition, food service, or hospitality management. (Prereq  $\$$ . Call 373-1079 for more information. May be repeated for credit. Qualified students may register for graduate credit at the University of Minnesota.)

**Fall Qtr** Sec 1 Time arr. Staff  
**Winter Qtr** Sec 2 Time arr. Staff  
**Spring Qtr** Sec 3 Time arr. Staff

**★FScN 5312 CHEMICAL AND INSTRUMENTAL ANALYSIS OF FOODS.** 5 degree credits, \$85 plus \$10 course fee. Total \$95.

Application of quantitative physical, chemical, and instrumental methods of analysis to the examination of food products; and evaluation of methods and interpretation of results. (Prereq 3110, Chem 3101 or  $\$$ . Limited to 15 students. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 **Lect and Lab TTh**—6:30-10, MSciL 125, 135, StP Campus, Davis, Warthesen

**FScN 5390 FOOD PACKAGING.** 3 degree credits, \$51 plus \$5 course fee. Total \$56.

Lecture and demonstration of properties of various packaging materials and their uses in the food industry. (Prereq Phys 1032 or equiv. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 **Th**—6:30-9, HckrH 100, StP Campus, Sander

**FScN 5512 MEAT AND PROTEIN TECHNOLOGY.** 4 degree credits, \$68 plus \$5 course fee. Total \$73.

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)

**Spring Qtr** Sec 1 **TTh**—6:30-9, MSciL 125, StP Campus, Addis

**FScN 5664 FIELD EXPERIENCE IN CLINICAL NUTRITION.** 3 degree credits, \$51.

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, \$68.

Problems related to the design and layout of new and remodeled food services. (Prereq 3740 or  $\$$ . Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 **W**—6:20-9:30, ClaOff B30, StP Campus, Snyder

**FScN 5750 SELECTED ASPECTS OF FOOD SERVICE AND HOSPITALITY BUSINESS MANAGEMENT.** 4 degree credits, \$68.

Management techniques applied to a food service or hospitality business. Methods of analysis and control. (Prereq 4 cr elementary statistics, 3750, MIS 5100, Acct 3255 or  $\$$ . Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 **W**—6:20-9:30, ClaOff B30, StP Campus, Snyder

**FScN 8120 FOOD PROCESS MICROBIOLOGY.** 4 degree credits—lecture only ( $\$$ )—\$92. 5 degree credits, \$115 plus \$10 course fee—lecture and lab—total \$125.

An intensive course in food microbiology covering relationship of environment to

Symbols, abbreviations, off-campus class locations begin on page 401.

**new**

occurrence, growth and survival of microorganisms in foods; evaluation of microbiological quality of food products; characteristics and activities of bacteria, yeasts and molds related to food manufacture and food spoilage; recognition of food-borne illnesses; control and inactivation of microorganisms; chemical, physical and microbiological principles in cleaning and sanitizing processing equipment; thermal process evaluation; microbiological fermentations and preservation methods; development of sanitation programs; hazard analysis and critical control point concepts; microbiological criteria for food products. (Prereq MicB 3103 or equiv and one other jr, sr or grad biological lab course; \$FScN 5120, 5122, 5123. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 **Lect W**—6:20-8, Th 7:20-9, MSciL 222, StP Campus, Busta  
 Sec 2 **Lect and Lab W**—6:20-10, Th 6:20-9, FScN 218, StP Campus, Busta

## foreign study (FS)

(See also SPAN—Student Project for Amity Among Nations)

**FS 3001-3002-3003 GREEK LANGUAGE AND SOCIETY.** 5 degree credits each quarter, \$MdGk 1101-1102-1103. \$77.50 each quarter.

**new**

A concentrated study of the fundamentals—reading, writing and conversation—of modern Greek. The emphasis will be on the language as a key to understanding modern Greek culture and society. The language textbook will be supplemented with readings from variety of modern Greek sources. The class is offered primarily for Spanners going to Greece but it is open to others. (No prereq for 3001; 3001 for 3002; 3002 for 3003. Meets concurrently with MdGk 1101-1102-1103)

**Fall Qtr** 3001 Sec 1 **Sa**—9 a.m.-1, BlegH 435, Stavrou  
**Winter Qtr** 3002 Sec 2 **Sa**—9 a.m.-1, BlegH 435, Stavrou  
**Spring Qtr** 3003 Sec 3 **Sa**—9 a.m.-1, BlegH 435, Stavrou

## forest products (ForP)

(See also environmental concerns courses, page 318)

*R. W. Erickson, Associate Professor of Forest Products*

*R. O. Gertjejansen, Associate Professor of Forest Products*

★**ForP 5403 WOOD AND WOOD PRODUCTS.** 3 degree credits, \$51 plus \$5 special fee. Total \$56.

Intended for elementary and secondary school teachers, but other interested persons may enroll. Lectures, laboratory exercises, demonstrations. Students directly involved in laboratory work. Nature of forest resource, properties of wood and wood products, manufacture of wood products. (No prereq. Limited to 24 students. Qualified students may register for graduate credit at the University of Minnesota)

**Spec Term** Sec 1 **Fri., Apr 8, 6-9**  
**Sat., Apr 9, 9 a.m.-4:30**  
**Sun., Apr 10, 9:30 a.m.-4**  
**Mon., May 16, 6-9**  
 KaufL 125, StP Campus, Gertjejansen, Erickson

(See Spring quarter registration dates, page 21. No late fee through Apr 1)

**Spec Term** Sec 2 **Fri., Apr 22, 6-9**  
**Sat., Apr 23, 9 a.m.-4:30**  
**Sun., Apr 24, 9:30 a.m.-4**  
**Mon., May 30, 6-9**  
 KaufL 125, StP Campus, Gertjejansen, Erickson

(See Spring quarter registration dates, page 21. No late fee through Apr. 15)

Symbols, abbreviations, off-campus class locations begin on page 401.

★ForP 5405 **PAPER IN TODAY'S WORLD.** 3 degree credits, \$51 plus \$5 special fee. Total \$56.

Intended primarily for elementary and secondary school teachers although other interested students may enroll. Each teacher will be required to prepare a teaching unit on pulp and paper for subsequent use in a junior or senior high school science class; others will write a report. The course consists of lectures and laboratories on pulp and paper manufacture, properties and characteristics of paper, recycling of paper, and paper for packaging. The Kaufert Laboratory is completely equipped with pulp and paper equipment including a pilot plant paper machine. Additional work required for graduate credit. (No prereq. Limited to 24 students. Qualified students may register for graduate credit at the University of Minnesota)

**Spec Term Sec 1** Fri., Feb. 25, 6-9,  
Sat., Feb. 26, 9 a.m.-4:30,  
Sun., Feb. 27, 9:30 a.m.-4  
Mon., Apr. 4, 6-9  
KaufL 125, StP Campus, Gertjejansen, Erickson

(See Spring semester registration dates page 19. No late fee through Feb 24.)

**Spec Term Sec 2** Fri, Mar. 11, 6-9  
Sat, Mar. 12, 9 a.m.-4:30  
Sun, Mar. 13, 9:30 a.m.-4  
Mon, Apr. 18, 6-9  
KaufL 125, StP Campus, Gertjejansen, Erickson

(See Spring semester registration dates page 19. No late fee through Mar. 10)

## forest resources (FR)

(See also environmental concerns courses, page 318)

*Roger T. Johnson, Associate Professor of Elementary Education*

*William R. Miles, Professor of Forest Resources*

★FR 5402 **INTERPRETATION AND MANAGEMENT OF FOREST ENVIRONMENTS.** 3 degree credits, \$51.

Biological foundations, biology of forest management, wildlife, hydrology, social and economic aspects, timber management and regulation, and recreation and amenity values. Intended for secondary school teachers and other interested students. (No prereq. Limited to 50 students. Includes one Saturday field trip. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr Sec 1** W—6:30-9:30, Richfield HS 249-250, Miles

★FR 5403 **FUNDAMENTALS OF NATURAL RESOURCE EDUCATION.** 3 degree credits, \$51 plus \$5 course fee. Total \$56.

Intended for elementary teachers. Study of soil, water, forest and wildlife resources of Minnesota and the biological principles and ecological implications of management. Environmental issues developed through interactions of natural resource manipulation will be discussed; outdoor teaching skills in environmental education will be experienced in a metropolitan center. (No prereq. Limited to 36 students. Qualified students may register for graduate credit at the University of Minnesota)

**Spec Term Sec 1** Fri, Oct 8, 6-9:30  
Sat, Oct 9, 8:30 a.m.-3:30,  
Sun, Oct 10, 9:30 a.m.-3:30,  
Mon, Nov 15, 6-9

Wood Lake Nature Center, Richfield (86th and Lakeshore Drive) Johnson, Miles

(See Fall registration dates, page 13. No late fee through Oct. 7)

**Spec Term Sec 2** Fri, Apr 8, 6-9:30  
Sat, Apr 9, 8:30 a.m.-3:30

continued next page

Symbols, abbreviations, off-campus class locations begin on page 401.

Sun, Apr 10, 9:30 a.m.-3:30

Mon, May 16, 6-9

Wood Lake Nature Center, Richfield (66th and Lakeshore Drive) Johnson, Miles  
(See Spring quarter registration dates, page 21. No late fee through Apr. 7)

## french (Fren)

(See also ethnic studies courses, page 300)

*F.R.P. Akehurst, Associate Professor of French*

*Tom Conley, Assistant Professor of French*

*Peter Lock, Professor of French*

*Thomas O'Donnell, Assistant Professor of French*

**BEGINNING FRENCH**, Fren 1101-1102-1103 and **INTERMEDIATE FRENCH**, 1104-1105, stress pronunciation, aural comprehension, basic grammatical forms, patterns of French and the ability to recombine them in new situations. Reading and writing skills will be developed as a complement to the acquisition of the spoken objectives. Each meeting will consist of language laboratory work as well as class recitation.

Language laboratory fees are charged for courses in which use of the lab is required or recommended. Cassette tapes are available to Extension Classes students on a take-home basis. Students can pick up tapes at the Learning Resources Center on the second floor of Walter Library or the second floor of Temporary South of Coffey on the St. Paul Campus. Students must present a fee statement when checking out tapes. Rental costs are covered by the special fees paid with tuition.

Learning Resource Center hours are: 8 a.m.-10 p.m., Monday-Thursday; 8 a.m.-6 p.m., Friday; 9 a.m.-6 p.m., Saturday; Sunday hours being planned.

**Fren 1101 BEGINNING FRENCH.** 5 degree credits, \$77.50 plus \$5 course fee. Total \$82.50. (IS). (No prereq)

**Fall Qtr**    Sec 1    **MTh**—6:20-8:25, FolH 104  
              Sec 2    **T**—6-10:05, FolH 104  
              Sec 3    **W**—6-10:05, FolH 104

**Fren 1102 BEGINNING FRENCH.** 5 degree credits, \$77.50 plus \$5 course fee. Total \$82.50. (IS). (Prereq 1101 or †)

**Winter Qtr**    Sec 1    **MTh**—6:20-8:25, FolH 104  
                  Sec 2    **T**—6-10:05, FolH 104

**Fren 1103 BEGINNING FRENCH:** 5 degree credits, \$77.50 plus \$5 course fee. Total \$82.50. (IS). (Prereq 1102 or †)

**Spring Qtr**    Sec 1    **MTh**—6:20-8:25, FolH 104  
                  Sec 2    **T**—6-10:05, FolH 104

**Fren 1104 INTERMEDIATE FRENCH.** 5 degree credits, \$77.50.

Consolidation of basic structure and development of oral fluency through readings and discussion. (Prereq 1103 or †)

**Fall Sem**    Sec 1    **M**—6:20-9:15, FolH 203

Symbols, abbreviations, off-campus class locations begin on page 401.

**Fren 1105 INTERMEDIATE FRENCH.** 5 degree credits, \$77.50.

Readings in contemporary culture. Development of vocabulary and improvement of ability to read, write and speak the language. (Prereq 1104 or #)

**Spring Sem** Sec 1 **M**—6:20-9:15, FoIH 107

**Fren 3015 FRENCH CONVERSATION AND COMPOSITION.** 5 degree credits, \$77.50.

Combines traditional conversational and composition courses. Orthoepic in approach, seeking command of French in pronunciation and grammar. Pastiche work, free composition, translation from and into French. (Prereq 1105 or #)

**Fall Sem** Sec 1 **W**—6:20-9:15, FoIH 107

## reading french

Fren 0001 is specifically designed for individuals who desire only a reading knowledge of the language. The French language requirements for a graduate degree may also be satisfied by successfully passing an examination given at the end of the course. Graduate students should check with their advisers for specific language requirements in their field of study.

**Fren 0001 READING FRENCH.** No credit, \$46.50. (IS)

This course is designed solely to impart a basic reading knowledge of the French language; full time is devoted to intensive reading and translation of a variety of texts. Since this approach deals only with the reading aspect of the language, there are no sessions for oral-aural drills and composition, and great skill can be acquired in a short time. At the end of one quarter the student is given the graduate Reading Examination in French. The department will certify to the Graduate School a reading knowledge of French upon successful completion of this examination. (No prereq. **Must be taken S-N**)

**Fall Qtr** Sec 1 **M**—6:20-8:50, FoIH 108

**Winter Qtr** Sec 2 **M**—6:20-8:50, FoIH 108

**Spring Qtr** Sec 3 **M**—6:20-8:50, FoIH 108

Fren 0001 is also offered as a Summer Extension Class.

## general college (GC)

*Fred M. Amram, Professor and Director, Consolidated Help Center*

*Sarabeth Barnes, Assistant Professor*

*F. T. Benson, Professor*

*Marshall Besikof, Lecturer*

*Roderick Blanchard, Lecturer*

*Henry Borow, Professor*

*Thomas Brothen, Instructor in Psychology and Family Studies*

*Thomas Buckley, Assistant Professor*

*Alecia Buonocore, Instructor*

Symbols, abbreviations, off-campus class locations begin on page 401.

*Richard Byrne, Instructor*  
*Jeffrey Carson, Lecturer*  
*Douglas Dearden, Professor*  
*Dan Detzner, Instructor*  
*Robert L. Fjerstad, Lecturer*  
*Ronald Fletcher, Lecturer*  
*David Foat, Instructor*  
*Jerome Gates, Professor*  
*David Giese, Professor*  
*William Glew, Lecturer*  
*Leroy Goodnough, Lecturer*  
*Paul Hagen, Associate Professor*  
*Dennis Hammond, Assistant Professor*  
*Evelyn Hansen, Associate Professor*  
*Forrest Harris, Professor*  
*William Hathaway, Associate Professor*  
*Robert Heiberg, Lecturer*  
*Dennis Hower, Associate Professor*  
*Niles Jefferson, Associate Professor*  
*Allen Johnson, Assistant Professor*  
*Fred Johnson, Associate Professor*  
*Peter Kahn, Lecturer*  
*Susan Knoblauch, Instructor*  
*Gail Koch, Instructor*  
*Patrick Kröll, Assistant Professor*  
*Alex Kurak, Professor*  
*Vernelle Kurak, Instructor*  
*Roger Larson, Professor*  
*Sander Latts, Associate Professor*  
*Valerie Liston, Instructor*  
*Mark Ludlow, Instructor*  
*Margaret MacInnes, Associate Professor*  
*Jeff Millikan, Instructor*  
*Norman Moen, Professor*  
*Frederick Neet, Instructor*  
*Earle Niederluecke, Lecturer*  
*Marie Panger, Instructor*  
*Thomas Ressler, Instructor*  
*Douglas Robertson, Instructor*  
*Louis Safer, Professor*  
*Robert Schommer, Instructor*  
*Solomon Shapiro, Professor*  
*Charles Sigmund, Assistant Professor*  
*Fredric Steinhauser, Professor*  
*William Stockdale, Professor*  
*Gail Thoen, Instructor*  
*Donald Warren, Instructor*  
*Robert Williamson, Instructor*  
*Sherwood Ann Wilson, Instructor*  
*Candido Zanoni, Associate Professor*

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.

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Symbols, abbreviations, off-campus-class locations begin on page 401.

The Associate in Arts degree from the General College can be completed in extension classes (see page 354). New baccalaureate degree programs are explained in General College Baccalaureate Programs, page 355. See also General College Occupational Programs, available all or in part through Extension, which may be applied toward the General College degree program, page 354.

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.

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- 1053 Selling Approaches and Techniques, page 153
- 1081 Personnel Selection for Non-Professionals, page 153
- 1111 Science in Context: Weather and Climate, page 161
- 1112 Science in Context: Man and His Environment, page 161
- 1113 Science in Context: Natural Resources, Their Utilization and Management page 161.
- 1132 Biological Science: The Human Body, page 161
- 1133 Nature Study, page 161
- 1178 Geology in Minnesota's State Parks, page 162
- 1211 Man in Society: An Introduction to Social Science, page 162
- 1212 Man in Society: Urban Problems, page 163
- 1221 Minnesota History, page 163
- 1235 The Law in Society, page 153
- 1236 United States: Crime and Delinquency, page 163
- 1282 Fields of Applied Psychology, page 163
- 1285 Social Science: Cultural Anthropology, page 163
- 1311 General Arts, page 151
- 1331 Music: Instrumental Music and Its Traditions, page 151
- 1357 Man's Religious Beliefs, page 151
- 1367 Literature: Contemporary Books and Periodicals, page 151
- 1363 Literature for Children, page 151
- 1374 Literature: Contemporary Books and Periodicals, page 151
- 1401 Vocabulary Building: How to Expand Your Word Power, page 158
- 1402 Communication Skills: Vocabulary Development, page 158
- 1405 Fundamentals of Usage and Style, page 158
- 1409 Communication Skills: Individual Study, page 158
- 1421 Writing Laboratory: Personal Writing, page 158
- 1422 Writing Laboratory: Communicating in Society, page 159
- 1429 Writing: Individual Study, page 159
- 1431 Fundamental College Mathematics Program, page 160
- 1445 Mathematics: Intermediate Algebra, page 160
- 1454 Statistics, page 161
- 1461 Oral Communication: Basic Principles, page 159
- 1465 Oral Communication: Interpersonal Communication, page 159
- 1471 Creativity: Creative Problem Solving, page 159
- 1485 Photography I, page 159
- 1502 Vocational Planning, page 163
- 1511 Introduction to Modern Business, page 153
- 1513 Principles of Small Business Operations, page 153
- 1533 Financial Mathematics: Procedures and Applications, page 154

- 1534 Practical Law, page 154
- 1535 Introduction to Data Processing, page 154
- 1540 Accounting Fundamentals, page 154
- 1542 Accounting Fundamentals, page 154
- 1551 Marketing: Retailing and Sales, page 157
- 1552 Marketing: Sales Promotion, page 157
- 1553 Marketing: Principles of Management, page 157
- 1557 Marketing: Supervised Work Experience, page 157
- 1721 Home Life: Marriage and Family Living, page 164
- 1722 Home Life: Parent-Child Relationships, page 164
- 1731 Home Life: Consumer Problems, page 155
- 3031 Murder, Mystery, and Mayhem: Whodunit?, page 151
- 3114 Personal Environmental Health, page 162
- 3116 Nutrition, Food, Its Uses and Abuses, page 162
- 3134 Nature and Its Impact on the Mind of Man, page 162
- 3236 Minnesota Corrections: Penal Alternatives, page 164
- 3282 Psychology Applied to Social Problems, page 164
- 3285 Anthropology of the City, page 164
- 3292 Social Science: Urban Problems—Geographic Perspectives, page 164
- 3335 Music of the 20th Century, page 152
- 3354 Philosophy, Science, and Religion, page 152
- 3374 Film and Society, page 152
- 3464 Communication in Organizations, page 160
- 3465 Communication for Health Workers, page 160
- 3531 Writing for Business and the Professions, page 160
- 3560 Personnel Administration, page 155
- 3581 Legal Studies: Business Organization, page 155
- 3582 Legal Studies: Real Estate, page 155
- 3583 Legal Studies: Estate Planning and Administration, page 155
- 3584 Legal Studies: Litigation and Trial Practice, page 156
- 3585 Legal Studies: Income Taxation, page 156
- 3586 Legal Studies: Legal Research, page 156
- 3602 Applied Supervision, page 156
- 3605 Interviewing, page 164
- 3612 Mental Health: Principles and Practices, page 165
- 3615 The Rehabilitation Process, page 165
- 3616 Crafts for Special Groups, page 152
- 3621 Counseling and Work Regarding Community Resources, page 165
- 3622 Human Services Seminar: Individual Helping Skills, page 165
- 3623 Human Services Seminar: Small Group Facilitation, page 165
- 3821 Toward a Good Life, page 152.
- 3841 Minnesota Resources, page 162
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- 3846 Minnesota Arts and Letters, page 152

## artistic expression

(See also Art Education; Art History; and Arts, Studio; IC 0024, The Artist's Hat; Phil 3502, Introduction to Aesthetics)

### **\*GC 1051 COMMERCIAL ART FOR NON-PROFESSIONALS.** 4 degree credits, \$62.

A course for anyone whose job or other activities requires some knowledge of and competence in the basic commercial art techniques. Course projects include design and preparation of newsletters, mailers, flyers, posters, and small ads. Techniques include layout and keylining, hand lettering, and use of cold type. Type and lettering styles, as well as printing processes, will be dealt with; also display problems, including bulletin boards, transparencies, other promotional materials. Stress will be on basic design and reproduction processes rather than on drawing skills. (No prereq. Limited to 30 students)

Fall Qtr      Séc 1      M—6:20-8:50, NH 102, MacInnes



★GC 1311 **GENERAL ARTS.** 4 degree credits, \$62.

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 M—6:20-8:50, NH 111, Gates

★GC 1331 **MUSIC: INSTRUMENTAL MUSIC AND ITS TRADITIONS.** 4 degree credits, \$62. (♦\$31)

"Listening awareness" is developed through acquaintance with sound of orchestral instruments, traditional means of organizing music, and representative works of some major composers. (No prereq)

Fall Qtr Sec 1 T—7-9:30, Buffalo JHS team room, Byrne

★GC 1357 **MAN'S RELIGIOUS BELIEFS.** 4 degree credits, \$62. (♦\$31)

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)

Fall Qtr ★Sec 1 T—7-9:30, Elim Church, Robbinsdale (Limit 50 students)

Spring Qtr Sec 2 T—5-7:30, NH 107, Zanoni

(See related courses, page 317)

★GC 1363 **LITERATURE FOR CHILDREN.** 4 degree credits, \$62. (♦\$31)

Survey of children's literature. For parents, prospective parents, or child-care workers who wish to become acquainted with children's literature and to guide children in selecting and reading books, or for other students who may not have had an opportunity to read books—including classics—when they were children. (No prereq)

Spring Qtr Sec 1 W—5-7:30, NH 107, Koch

★GC 1367 **LITERATURE: CONTEMPORARY BOOKS AND PERIODICALS.** 4 degree credits, \$62. (♦\$31)

Student reads and evaluates current books, both fiction and nonfiction, and analyzes book reviews and other selections in current magazines to see how writers today interpret their world and thus influence public opinion and contemporary thought. (No prereq)

Winter Qtr Sec 1 M—7-9:30, Nicollet JHS 200, Burnsville (Limit 60 students)

Spring Qtr Sec 2 M—7-9:30, St Stephens Church 208, WStP (Limit 45 students)

★GC 1374 **LITERATURE: THEATRE—FILM AND DRAMA.** 4 degree credits, \$62 plus \$4 special fee. Total \$66. (♦\$31 plus \$4 special fee. Total \$35) (IS)

Student studies stage plays and films, both as art forms and as media of communication; local film showings, theatre performances, television dramas; critical reports. (No prereq)

Fall Qtr Sec 1 Th—6:20-8:50, NH 213, Hagen

(See other film courses, page 291)

★GC 3031 **MURDER, MYSTERY, AND MAYHEM: WHODUNIT?** 4 degree credits, \$62.

An investigation of the themes of death by violence and of the detection and punishment of the murderer, concentrating on the origins and the development of the "murder mystery" and the detective story. Readings in Poe, Collins, Conan Doyle, Chesterton, Hammett, Chandler, Sayers, Christie, Simonon, and others. Implications of the genre; reasons for its appeal; the detective as hero; the role of violence in society; moral issues and dilemmas; changing trends and attitudes in the seventies. (Prereq 45 cr or 1. Limited to 50 students)

Winter Qtr Sec 1 T—6:20-8:50, FolH 105, MacInnes

Symbols, abbreviations, off-campus class locations begin on page 401.

**GC 3335 MUSIC OF THE 20TH CENTURY.** 4 degree credits, \$62. (◆\$31)

How music today differs from what it was at start of century, for understanding by lay listener. Main lines of development of 20th-century music explored through study of selected representative compositions by its most influential composers. Additional experiences to enhance understanding of current experiments and trends in avant-garde movements. (Prereq 45 cr or §)

**Winter Qtr** Sec 1 M—5-7:30, NH 111, Byrne

**GC 3354 PHILOSOPHY, SCIENCE, AND RELIGION.** 4 degree credits, \$62. (◆\$31)

Philosophical inquiry into conflict between modern science and religion. Provides a layman's orientation to historical and philosophical development of conflict, to status of conflict today, and to scientific and religious attitudes and emotions. By analysis of logical and psychological consequences of religious and scientific world views and through discussion of areas of possible reconciliation, students gain objective understanding of various dimensions of the conflict. Students need not have had any previous course in science. (Prereq 45 cr or §)

**Winter Qtr** Sec 1 T—6:20-8:50, NH 216, Zanoni

**GC 3374 FILM AND SOCIETY.** 4 degree credits, \$62 plus \$4 course fee. Total \$66 (◆\$31 plus \$4 course fee. Total \$35)

Ways in which film and society affect each other, social issues raised in film, public attitudes toward film, effect of film upon attitudes and behaviors, and film medium itself—how that medium (photography, editing, acting, composition, color, sound, etc.) provides illumination and insight into social problems it analyzes. Students view films and read about them and study specified social problems. Social issues examined vary from quarter to quarter, typically covering such areas as urban living, minority stereotyping, ethical decisions, marriage and family, politics, and sexual mores. (Prereq 45 cr or §; 1374 recommended)

**Winter Qtr** Sec 1 T—6:20-8:50, NH 213, Warren

(See other film courses, page 291)

**\*GC 3616 CREATIVITY: CRAFTS.** 4 degree credits, \$62.

For students who will use craftwork as a therapeutic device in their professions. To acquaint students with broad families of craft materials and develop basic techniques for working them. Fosters development of creative and artistic attitudes toward materials, techniques, and products and promotes development of flexible approaches to problems of equipment, facilities, and budget. An important concern is to make students aware of themselves in the process of creating craftwork. (Prereq 45 cr or §. Limited to 30 students)

**Spring Qtr** Sec 1 Th—6:20-8:50, NH 102, Gates

(See also Art Education and Design)

**\*GC 3821 TOWARD A GOOD LIFE.** 8 degree credits, \$124

People's aspirations toward a "good life," their concept of it, and efforts to define and attain it from early times to present explored in lectures, symposia, seminars, and group discussions, as well as through selected readings, films, field projects, and experiences with art, music, and science. Material and approaches are interdisciplinary and aim at enabling students to develop understanding of the nature of people and their relation to the natural and social environment, to perceive significant impediments to a good life, to examine and compare differing concepts of a good life and varied efforts to achieve it, and to evolve their own reasonable view of what constitutes a good life for themselves and for society. Distribution of credits among CLE areas of Artistic Expression, Natural Science, Social Science, Symbolic Systems will be discussed at first class meeting. (Prereq 45 cr including 5 cr each in artistic expression, natural science, social science, symbolic systems, or §. Limited to 30 students.)

**Spring Sem** Sec 1 W—5-9:30, NH 111, MacInnes, Liston, Detzner

**GC 3846 MINNESOTA ARTS AND LETTERS.** 4 degree credits, \$62. (◆\$31)

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

Symbols, abbreviations, off-campus class locations begin on page 401.

history and traditions. Class work supplemented by off-campus study. Independent projects encouraged. (Prereq 45 cr or †)

**Spring Qtr** Sec 1 **M**—6:20-8:50, FolH 202, Moen

(See other Minnesota courses, page 313)

## business studies

(See also Hist 3841, American Business History)

### ★GC 1053 SELLING APPROACHES AND TECHNIQUES. 3 degree credits, \$46.50.

Course designed to build a foundation for a more successful sales or business career. A study of principles that influence people; presentation of the product or service; key words; motivation; praise and appreciation; power closing techniques. Develops confidence, a creative mind, and earning potential through a positive plan of action, using the creative approach to sales. (No prereq. Limited to 30 students)

**Fall Qtr** Sec 1 **M**—6:20-8:50, RarigC 610, Jacobson

Sec 2 **W**—6:20-8:50, RarigC 610, Jacobson

**Winter Qtr** Sec 3 **T**—6:20-8:50, BlegH 404, Rogers

**Spring Qtr** Sec 4 **M**—7-9:30, Sandburg JHS 210, Golden Valley; Jacobson

### ★GC 1081 PERSONNEL SELECTION FOR NON-PROFESSIONALS. 4 degree credits, \$62

Intended for supervisors and administrators who need basic knowledge in Equal Opportunity Laws and Affirmative Action programs, and how these affect the recruiting processes. Focus on the practical. (No prereq. 3560 recommended. Limited to 35 students)

**Winter Qtr** Sec 1 **Th**—6:20-8:50, NH 107, Fjerstad

(See also Industrial Relations; Amin 5131, Industrialization, Employment, and the American Indian and Psy 5701, Personnel and Industrial Psychology)

### ★GC 1235 THE LAW IN SOCIETY. 4 degree credits, \$62.

For students to appreciate the role of law in our changing society, legal aspects of current topics will be discussed. Students select topics for study from the following: courts and court systems, corrections, police-community relations, environmental problems, drug problems, welfare and domestic problems, wills and probate, insurance, and consumer rights. When possible on an individual or group basis, students visit conciliation, municipal, or district courts, prisons, workhouses, jails, juvenile detention centers, or similar institutions. (No prereq. Limited to 40 students. **Must be taken S-N.**)

**Fall Qtr** Sec 1 **W**—6:20-8:50, NH 209, Hower

Sec 2 **M**—7-9:30, Brooklyn Center HS 12

**Winter Qtr** Sec 3 **W**—6:20-8:50, NH 216, Hower

**Spring Qtr** Sec 4 **M**—7-9:30, Nicollet JHS 226, Burnsville

(See also Business Law; Criminal Justice Studies; and Sociology)

### ★GC 1511 INTRODUCTION TO MODERN BUSINESS. 4 degree credits, \$62. (IS)

This course provides an overview of the economic environment in which business operates. The major functions of a business organization are surveyed including production, finance, personnel and marketing. A useful introductory course for students planning to do more work in business; also is recommended for those who want to survey the field without study in detail. (No prereq. Limited to 40 students)

**Winter Qtr** Sec 1 **M**—5-7:30, NH 207, Ludlow

Sec 2 **T**—7-9:30, Buffalo JHS, team room, Hammond

### ★GC 1513 PRINCIPLES OF SMALL BUSINESS OPERATIONS. 4 degree credits, \$62. (IS)

Designed specifically for those who plan to own or operate some form of small business, this course deals with the following topics: environment and management of the small business; problems of initiating the business; financial and

Symbols, abbreviations, off-campus class locations begin on page 401.

administrative control; marketing program and policies; and legal and governmental relationship. (No prereq. Limited to 30 students)

Fall Qtr Sec 1 W—6:20-8:50, NH 122, Hammond

Winter Qtr Sec 2 W—5-7:30, NH 107, Ludlow

Spring Qtr Sec 3 Th—6:20-8:50, NH 107, Hammond

**★GC 1533 FINANCIAL MATHEMATICS: PROCEDURES AND APPLICATIONS.** 4 degree credits, \$62.

Using only basic mathematical skills, students solve problems with percentages, simple interest and discount, compound interest, annuities, corporate securities, and depreciation. Through study of practical business situations, students develop calculation skills to assist them in dealing with various financial problems. (No prereq. Limited to 45 students)

Fall Qtr Sec 1 W—6:20-8:50, NH 216, Larson

**★GC 1534 PRACTICAL LAW.** 4 degree credits, \$62.

Practical topics in field of law. Formation and discharge of contracts, torts (personal injury and property damage suits), criminal law, bailments, nature and classification of real and personal property, and joint ownership and tenancy. In addition, some attention is given to legal implication of life, property, auto insurance, and an introduction to wills and estate planning. (No prereq. Limited to 40 students)

Fall Qtr Sec 1 Th—7-9:30, Buffalo JHS, team room

Sec 2 M—7-9:30, Hillside JHS, Maplewood

Winter Qtr Sec 3 T—6:20-8:50, NH 207

Spring Qtr Sec 4 W—7-9:30, Minnetonka HS 119, Hower

(See also Business Law)

**★GC 1535 INTRODUCTION TO DATA PROCESSING.** 4 degree credits, \$62. (IS)

Designed to provide an introduction to data processing for students wishing to acquaint themselves with basic aspects of this important and rapidly evolving technology. Useful as well to those considering the possibility of entering a course of training for work in the world of tabulation equipment, programming computers, and related areas. The course defines data processing and explores its history, summarizes some of its basic applications, and assesses its social and economic effects. Students study terminology; basic steps in the processing of data and kinds of machines used to accomplish these steps, such as keypunches, sorters, interpreters, reproducers, collators, accounting machines, calculators, and computers, with an elementary introduction about their operation. Career opportunities are explained and suggestions for further study are outlined. (No prereq. Limited to 35 students)

Fall Qtr Sec 1 W—6:20-8:50, CD 216, Ressler

Spring Qtr Sec 2 W—6:20-8:50, CD 218, Ressler

**★GC 1540 ACCOUNTING FUNDAMENTALS.** 4 degree credits, \$62.

Basic accounting cycle, including balance sheet and income statement methodology, and end-of-period adjustments. Students are taken through accounting cycle for both service and merchandising businesses. Other topics include special journals and accounting procedures for inventories, payables, and receivables. (No prereq. Limited to 40 students)

Fall Qtr Sec 1 M—6:20-8:50, NH 209

Sec 2 Th—7-9:30, Elim Church, Robbinsdale

Winter Qtr Sec 3 W—6:20-8:50, NH 209, Larson

**★GC 1542 ACCOUNTING FUNDAMENTALS.** 4 degree credits, \$62.

Continues first-year accounting sequence. Topics include handling of dividends, retained earnings and treasury stock, debt, investments, financial reporting, and sources and uses of working capital. Attention is given to examination of financial statements. Introduction to accounting for manufacturing operation and cost analysis problems. (Prereq 1540. Limited to 40 students)

Spring Qtr Sec 1 W—6:20-8:50, NH 209, Larson

Symbols, abbreviations, off-campus class locations begin on page 401.

**GC 1731 HOME LIFE: CONSUMER PROBLEMS.** 4 degree credits, \$62. (♦\$31) (IS)

Develops understanding of economic system from viewpoint of the family as consumer unit. Emphasizes fundamentals of financial planning and personal economic decision making and application of these concepts to such specific areas as food, clothing, shelter, buying insurance protection, saving and investing, using credit facilities, and obtaining and evaluating consumer information. (No prereq)

**Spring Qtr** Sec 1 Th—6:20-8:50, NH 207, Kroll

(See also IC 0001, Individual and Family Budget Planning)

**★GC 3560 PERSONNEL ADMINISTRATION.** 4 degree credits, \$62.

An overview of the personnel related activities in business and other organizations. Using the personnel department setting, some areas of study will be recruiting, employee reward systems, employee training, and organized labor. (Prereq 45 cr or §. Limited to 40 students)

**Fall Qtr** Sec 1 Th—6:20-8:50, NH 216, Kroll

## legal studies

Legal studies courses are highly specialized courses taught by practicing lawyers. The courses are intended for persons who assist lawyers in some capacity and who wish to increase their knowledge and skills in particular areas of law. Persons registering for these courses must have completed the prerequisites or their equivalents.

**★GC 3581 LEGAL STUDIES: BUSINESS ORGANIZATION.** 4 degree credits, \$62.

The study of the legal organization of business entities is the primary focus of this course. Emphasis is on the role of the lawyer and the legal assistant in the formation of various business organizations. This includes a survey of the fundamental principles of law applicable to each type of business organization and preparation of the related documents. (Prereq 1540 or Acct 1050 or old Acct 1024; GC 1235 and 1534 or BLaw 3058-3078, 3088 or §. Limited to 25 students)

**Winter Qtr** Sec 1 W—6:20-8:50, NH 207, Fletcher

**Spring Qtr** Sec 2 W—6:20-8:50, NH 207, Fletcher

**★GC 3582 LEGAL STUDIES: REAL ESTATE.** 4 degree credits, \$62.

The laws relating to real property and the common types of real estate transactions and conveyances are the primary topics treated in this course. Various instruments such as deeds, contracts, leases, deeds of trust, etc., are studied with emphasis on how these instruments are drafted. Study activities include research projects relating to the subject matter and practice in retrieving and recording information. (Prereq 1540 or Acct 1050 or old Acct 1024; GC 1235 and 1534 or BLaw 3058-3078, 3088 or §. Limited to 25 students)

**Fall Qtr** Sec 1 T—6:20-8:50, NH 209A, Heiberg

**Spring Qtr** Sec 2 T—6:20-8:50, NH 209A, Heiberg

(See also Real Estate)

**★GC 3583 LEGAL STUDIES: ESTATE PLANNING AND ADMINISTRATION.** 4 degree credits, \$62.

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 1540 or Acct 1050 or old Acct 1024; GC 1235 and 1534 or BLaw 3058-3078, 3088 or §. Limited to 25 students)

**Fall Qtr** Sec 1 W—6:20-8:50, NH 209A, Glew

**Winter Qtr** Sec 2 M—6:20-8:50, NH 209A, Glew

Symbols, abbreviations, off-campus class locations begin on page 401.

**★GC 3584 LEGAL STUDIES: LITIGATION AND TRIAL PRACTICE.** 4 degree credits, \$62.

This course of study will include an analysis and discussion of the following: common types of litigation, premises of litigation, sources of law, the court systems, attorneys, types of lawsuits, usual defenses, Minnesota civil procedures, discovery procedures, court procedures, trial, post-trial motion procedures, appeal, enforcement of judgment, various types of litigation, and good investigation of facts basic to adequate preparation for litigation. Particular attention is given to the role of the legal assistants in assisting the attorneys in these matters. (Prereq 1540 or Acct 1050 or old Acct 1024; GC 1235 and 1534 or BLaw 3058-3078, 3088 or §. Limited to 25 students)

**Fall Qtr** Sec 1 **Th**—6:20-8:50, NH 209A, Blanchard

**Winter Qtr** Sec 2 **T**—6:20-8:50, NH 209A, Blanchard

**★GC 3585 LEGAL STUDIES: INCOME TAXATION.** 4 degree credits, \$62.

This course will provide a detailed study of the law of income taxation—state, federal and local—including preparation of income tax returns and related materials and a survey of the various administrative and judicial tribunals, and their jurisdiction, involved in the determination of income tax controversies. (Prereq 1540 or Acct 1050 or old Acct 1024; GC 1235 and 1534 or BLaw 3058-3078, 3088 or §. Limited to 25 students)

**Fall Qtr** Sec 1 **M**—6:20-8:50, NH 209A, Besikof

**Spring Qtr** Sec 2 **M**—6:20-8:50, NH 209A, Besikof

(See related courses in Accounting)

**★GC 3586 LEGAL STUDIES: LEGAL RESEARCH.** 4 degree credits, \$62.

The course will examine in depth the law library, survey and various reference sources available to lawyers in determining applicable law, and study the processes of legal research and writing of memoranda presenting results of that legal research. The course will include numerous practice problems requiring legal research and memoranda writing, utilizing the statutes, case reports, encyclopedias, treatises, and other legal research sources. (Prereq 1540 or Acct 1050 or old Acct 1024; GC 1235 and 1534 or BLaw 3058-3078, 3088 or §. Limited to 25 students)

**Winter Qtr** Sec 1 **Th**—5-7:25, NH 122, Schommer

**Spring Qtr** Sec 2 **Th**—5-7:25, NH 209A, Schommer

**★GC 3602 APPLIED SUPERVISION.** 4 degree credits, \$62.

Practical approaches to supervision principles and problems in the small- and medium-size business. Through case problems, role playing in simulated business situations, and decision exercises, students learn to understand the relationship between authority and responsibility as well as the delegation process; to select and apply manager or group decision-making methods; to understand some techniques of the communication process between management and employees; to have some practical knowledge of the concept of job enrichment; and to identify some of the characteristics of a high productivity manager. (Prereq 45 cr or §. Limited to 40 students)

**Winter Qtr** Sec 1 **M**—6:20-8:50, Jones 4, Kroll

(See also Industrial Relations)

## marketing sequence

(See also Marketing; Journalism; and GC 1053, Selling Approaches and Techniques)

GC 1551, 1552, and 1553 are specifically designed for the individual interested in mid-management positions in retailing and sales. These courses are aimed at developing knowledge and skills relating to positions in retail departmental management, sales, wholesale distribution, credit management, and buying.

The content for the courses has been developed with the aid of an advisory

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Symbols, abbreviations, off-campus class locations begin on page 401.

committee of Minneapolis and St. Paul businessmen. Topics selected are: introduction to marketing, wholesaling salesmanship, credit, customer services, advertising, retail display, buying and merchandising, training and supervision of personnel, organizational management, and government relations.

These topics have been put in context as they apply to the mid-manager's job. The courses may be taken individually and need not be taken in sequence. Upon successful completion of all three courses, 3 credits of GC 1557 and GC 1537, Salesmanship (offered through the Department of Independent Study), a certificate in Marketing is granted the students by the General College of the University.

**★GC 1551 MARKETING: RETAILING AND SALES.** 4 degree credits, \$62.

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    **W—6:20-8:50, Jones 2**  
                   Sec 2    **Th—6:20-8:50, NH 122, Goodnough**  
                   Sec 3    **Tentatively scheduled** for Fall qtr at Cambridge HS

**★GC 1552 MARKETING: SALES PROMOTION.** 4 degree credits, \$62.

Topics of study include: the psychology of advertising, advertising media selection, store interior layout and display, and public relations. The emphasis is on learning to develop coordinated promotional plans for marketing operations. (No prereq. Limited to 30 students)

**Winter Qtr**    Sec 1    **W—6:20-8:50, NH 122**  
                   Sec 2    **Th—6:20-8:50, NH 216, Goodnough**  
                   Sec 3    **Tentatively scheduled** for Winter qtr at Cambridge HS

**★GC 1553 MARKETING: PRINCIPLES OF MANAGEMENT.** 4 degree credits, \$62.

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    **W—6:20-8:50, PeikH 225**  
                   Sec 2    **Th—6:20-8:50, Pt 111, Goodnough**

**GC 1557 MARKETING: SUPERVISED WORK EXPERIENCE.** 1-3 degree credits, \$15.50, \$31, or \$46.50.

Students will prepare reports about their work activities, duties, and responsibilities for evaluation by their job supervisor and/or the program instructor. Usual registration is for 1 credit per quarter taken concurrently with GC 1551, 1552, 1553. Other credit arrangements should be made with the instructor. (Prereq concurrent or previous registration in GC 1551, 1552, 1553)

**Fall Qtr**        Sec 1    **W—Arr.**  
                   Sec 2    **Th—Arr., Goodnough**  
**Winter Qtr**    Sec 3    **W—Arr.**  
                   Sec 4    **Th—Arr., Goodnough**  
**Spring Qtr**    Sec 5    **W—Arr.**  
                   Sec 6    **Th—Arr., Goodnough**

# communication skills

(See also English; Rhetoric; Speech; Study Skills; Informal Courses; and other study helps, page 305)

**★GC 1401 VOCABULARY BUILDING: HOW TO EXPAND YOUR WORD POWER.** 3 degree credits, \$46.50. (IS)

Designed to extend the range and increase the quality of vocabulary. Mastery of 150 word elements which furnish a basis for the analysis and formation of thousands of English words. Dictionary study, programmed learning sequences, readings in context and tape recordings. Materials arranged to accommodate persons at any vocabulary level. Student progresses at his own rate. (No prereq. Limited to 45 students)

<b>Fall Qtr</b>	Sec 1	W—6:20-8:50, Jones 4
<b>Winter Qtr</b>	Sec 2	M—6:20-8:50, NH 209
	Sec 3	Th—7-9:30, Hillside JHS, Maplewood
<b>Spring Qtr</b>	Sec 4	T—6:20-8:50, NH 209

**★GC 1402 COMMUNICATION SKILLS: VOCABULARY DEVELOPMENT.** 3 degree credits, \$46.50.

In-class discussion, small-group work, and individual projects. Students develop substantial and workable vocabulary through study of dictionary, word parts, and meanings in context in programmed textbooks, current college textbooks, and individually compiled contextual passages. Both written and oral classwork. (No prereq. Limited to 50 students)

<b>Fall Qtr</b>	Sec 1	Th—7-9:30, StP Capitol Complex, Civil Service Center
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**GC 1405 FUNDAMENTALS OF USAGE AND STYLE.** 3 degree credits, \$46.50.

Students will study English grammar and determine its pertinence to their own writing on an individual study basis. They will arrange a programmed-learning sequence, write two short papers, and consult with a staff member of the Reading and Writing Skills Center, NH 109, at frequent intervals. Students enrolled in the course can come to the Center to study and consult with a staff member any day between 5:00-8:00 p.m. The Center is open Monday through Thursday. (No prereq)

<b>Fall Qtr</b>	Sec 1	Arr. Center staff
<b>Winter Qtr</b>	Sec 2	Arr. Center staff
<b>Spring Qtr</b>	Sec 3	Arr. Center staff

**GC 1409 COMMUNICATION SKILLS: INDIVIDUAL STUDY.** 2 degree credits, \$31.

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)

<b>Fall Qtr</b>	Sec 1	Arr. Center staff
<b>Winter Qtr</b>	Sec 2	Arr. Center staff
<b>Spring Qtr</b>	Sec 3	Arr. Center staff

**★GC 1421 WRITING LABORATORY: PERSONAL WRITING.** 4 degree credits, \$1412, 1413, \$62.

Students read and write descriptive narratives, characterizations, and autobiographical sketches. In laboratory they are given personal help with individual writing problems. Emphasis is on clear and effective written expression. Satisfies the first quarter of the freshman English requirement for some degree programs. For additional information call Extension Counseling, 373-3905. (No prereq. Limited to 30 students)

<b>Fall Qtr</b>	Sec 1	Th—7-9:30, St Stephens Church, WStP
	Sec 2	T—6:20-8:50, NH 107
<b>Winter Qtr</b>	Sec 3	W—6:20-8:50, Jones 2
<b>Spring Qtr</b>	Sec 4	T—6:20-8:50, NH 216

Symbols, abbreviations, off-campus class locations begin on page 401.



★GC 1422 **WRITING LABORATORY: COMMUNICATING IN SOCIETY.** 4 degree credits, \$1415, 1423. \$62.

Primarily through writing, but also through reading and discussion, student analyzes how people communicate in society: how they perceive events, how they think about them, and how they write and talk about them. Student examines assumptions, inferences, and distortions involved in thinking; habits and processes of observations; factual and slanted reporting; persuasive devices; and cultural and cross-cultural communication. Satisfies the second quarter of the freshman English requirement for some degree programs. For additional information, call Extension Counseling, 373-3905. (Prereq 1421 or \*. Limited to 30 students)

**Spring Qtr** Sec 1 **W**—6:20-8:50, NH 122

**GC 1429 WRITING: INDIVIDUAL STUDY.** 2 degree credits, \$31.

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 **Arr.** Center staff

**Winter Qtr** Sec 2 **Arr.** Center staff

**Spring Qtr** Sec 3 **Arr.** Center staff

★GC 1461 **ORAL COMMUNICATION: BASIC PRINCIPLES.** 4 degree credits, \$62.

In conversations, discussions and prepared speeches, student shares his ideas, attitudes, and experiences with others. He examines pervasiveness and function of communication in modern life, and he inquires into how language functions as means of communication. He identifies various uses to which people put speech and basic biological, psychological, and social needs these uses are intended to satisfy. Given this framework, he listens and responds to communication of others and comments on what he sees, hears, and feels. (No prereq. Limited to 45 students)

**Spring Qtr** Sec 1 **Th**—7-9:30, St Stephens Church 208, WStP

★GC 1465 **ORAL COMMUNICATION: INTERPERSONAL COMMUNICATION.** 4 degree credits, \$62.

Emphasis on interpersonal communication. Students apprehensive about the "personal" dimension should not take this course. Students examine various aspects of their own communication patterns—verbal, nonverbal, and vocal—try to discover why they are effective or ineffective communicators, and try to uncover some origins of their communicative behavior. Course asks students to begin or deepen their search for identity and to aid others in their search, to study means people use to relate to each other, and to understand ways we alienate ourselves from each other. (No prereq. Limited to 25 students)

**Fall Qtr** Sec 1 **M**—6:20-8:50, NH 107, Hansen

★GC 1471 **CREATIVITY: CREATIVE PROBLEM SOLVING.** 4 degree credits, \$62.

To develop creative potential, student explores creative processes and tries to solve individual problems—personal, academic, or vocational—in imaginative ways. Working with others in an atmosphere of trust, involvement, and understanding, student becomes aware that individuals approach problems differently, even uniquely; and by shedding rigidity, student begins to solve problems more flexibly and productively. (No prereq. Limited to 30 students)

**Fall Qtr** Sec 1 **T**—6:20-8:50, NH 122, Amram

Sec 2 **W**—7-9:30, Cambridge HS

**Winter Qtr** Sec 3 **Th**—7-9:30, Southwest HS 9, Mpls; Amram

Sec 4 **W**—7-9:30, Brooklyn Center HS 12, Benson

**Spring Qtr** Sec 5 **W**—6:30-9:00, Jones 2, Benson

★GC 1485 **PHOTOGRAPHY I.** 4 degree credits, \$62 plus \$15 course fee. Total \$77.

Student receives instruction in use of cameras, primary studies in optics, film and paper emulsions, and similar topics. Darkroom work acquaints student with

Symbols, abbreviations, off-campus class locations begin on page 401.

ordinary darkroom techniques, film developing, and paper printing. (No prereq. Limited to 20 students)

**new**

**Fall Qtr** Sec 1 **W**—6-10, MacP, Millikan  
**Winter Qtr** Sec 2 **W**—6-10, MacP, Millikan  
**Spring Qtr** Sec 3 **W**—6-10, MacP, Millikan

**★GC 3464 COMMUNICATION IN ORGANIZATIONS.** 4 degree credits, \$62.

For managers, supervisors, and others who directly control quality of life of persons in organizations; course is focused upon processes and problems involved in working and communicating with people in organizational settings and upon knowledge, attitudes, and skills which underlie effective behavior in organizational relationships. (Prereq 45 cr or  $\$$ . Limited to 40 students)

**Winter Qtr** Sec 1 **T**—5-7:30, Jones 4, Hansen

**★GC 3465 COMMUNICATION FOR HEALTH WORKERS.** 4 degree credits, \$62.

**new**

Special needs of communication which arise from stressful conditions often associated with health care. How to talk and relate to people in pain or discomfort; to those facing certainty or uncertainty of prolonged and serious illness; to the crippled, aged, dying; and to patients' relatives. (Prereq 45 cr or  $\$$ , 1465 recommended. Limited to 30 students)

**Spring Qtr** Sec 1 **T**—6:20-8:50, NH 122, Hansen

**★GC 3531 WRITING FOR BUSINESS AND THE PROFESSIONS.** 4 degree credits, \$1531. \$62.

Students write letters, informal and formal reports, recommendations, proposals, summaries, memos—in short, the forms of writing used in business; in health, education, and welfare; and in legal professions. Effort is made each quarter to adapt content to vocational needs of students enrolled. Form, clarity, economy of expression, and suitable tone are stressed. Typed final drafts are required. (Prereq 45 cr or  $\$$ . Limited to 30 students)

**Spring Qtr** Sec 1 **Th**—6:20-8:50, NH 122

(See also technical writing courses in English and Informal Courses)

## mathematics

**★GC 1431 FUNDAMENTAL COLLEGE MATHEMATICS PROGRAM.** 5 degree credits, \$77.50.

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 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. Limited to 30 students)

**Fall Qtr** Sec 1 **TTh**—6:30-8:35, FoIH 109, Knoblauch

**Winter Qtr** Sec 2 **TTh**—6:30-8:35, FoIH 109, Knoblauch

**Spring Qtr** Sec 3 **TTh**—6:30-8:35, FoIH 109, Knoblauch

**★GC 1445 MATHEMATICS: INTERMEDIATE ALGEBRA.** 5 degree credits, \$77.50. (IS)

Concepts and manipulative skills of algebra necessary for students to compete in a college algebra course. Topics include discussion of real number system, special products and factoring, exponents and radicals, linear equations in one and two variables, quadratic equations in one variable, progressions, inequalities, variation, and logarithms. Prospective student may have to give evidence of adequate preparation. (Prereq 1 yr high school algebra. Limited to 40 students)

**Fall Qtr** Sec 1 **MW**—6:30-8:35, FoIH 105, Barnes

**Winter Qtr** Sec 2 **MW**—6:30-8:35, FoIH 105, Robertson

**Spring Qtr** Sec 3 **MW**—6:30-8:35, FoIH 105, Barnes

Symbols, abbreviations, off-campus class locations begin on page 401.

**★GC 1454 STATISTICS.** 4 degree credits, \$62.

Introduction to modern statistics, emphasizing problem solving through statistical decision making. Topics include organization and presentation of data, summary statistics, sampling, probability, distributions, simple estimation, and tests of hypotheses. Data presented acquaint students with wide applicability of statistics. Attention is drawn to limitations of methods of presentation. Requires only a working knowledge of arithmetical skills. (No prereq. Limited to 40 students)

**Fall Qtr** Sec 1 **W**—5-7:30, NH 207, Giese

**Winter Qtr** Sec 2 **Sa**—9:30 a.m.-12, NH 207, Giese

**Spring Qtr** Sec 3 **W**—7-9:30, StP Capitol Complex, Civil Service Center, Giese

## natural science

See other environmental concerns courses, page 318)

**GC 1111 SCIENCE IN CONTEXT: WEATHER AND CLIMATE.** 4 degree credits, \$62. (♦ \$31)

Day-to-day and long-range weather patterns in terms of interactions among atmosphere, oceans, land surfaces, and motions of the earth. Fair weather, storms, seasonal changes, air pollution, and water resource problems. Basic principles of science are applied to problems of analyzing and forecasting day-to-day weather, interpreting climates and climatic change, and realizing the great extent to which man is changing his atmospheric environment. (No prereq)

**Spring Qtr** Sec 1 **Th**—5-7:30, FolH 107, A Johnson

(See also Geog 1425, Introduction to Meteorology)

**GC 1112 SCIENCE IN CONTEXT: MAN AND HIS ENVIRONMENT.** 4 degree credits, \$62. (♦ \$31)

Biological principles and interrelationships between man and his environment; study of ecology as applied to aspects of man's past, present, and future existence, principles of ecology as seen in structure and function of the ecosystem; pollution of soil, air, and water; population explosion; biosocial demands of environmental planning and maintenance; and relationship of people, nutrition, and disease to survival. Examination of certain aspects of radiation sources and environment, marine ecology, and man's future ecological needs. (No prereq)

**Fall Qtr** Sec 1 **M**—6:20-8:50, SciCB 125, Jefferson

**Winter Qtr** Sec 2 **T**—6:20-8:50, SciCB 125, Jefferson

**GC 1113 NATURAL RESOURCES, THEIR UTILIZATION AND MANAGEMENT.** 4 degree credits, \$62. (♦ \$31)

Nature of natural resources (minerals, fuels, soil, land, air, water, plants, and animals), their distribution, and energy required to transform them into useful products are studied with respect to contemporary problems of supply and environmental damage. (No prereq)

**Winter Qtr** Sec 1 **M**—6:20-8:50, NH 213, Steinhauser

**GC 1132 BIOLOGICAL SCIENCE: THE HUMAN BODY.** 4 degree credits, \$62. (♦ \$31)

Problems of physical, mental, and social health are related to anatomy, physiology, and needs of the human organism. In studying the heart, for example, instructor shows what it is, how it works, its importance to overall functioning of the body, what can go wrong with it, and what is known about keeping it on the job. Films, televised dissections, and demonstrations supplement lectures. (No prereq)

**Fall Qtr** Sec 1 **T**—6:20-8:50, SmithH 315, Dearden

**Spring Qtr** Sec 2 **Sa**—9:30 a.m.-12, SmithH 315, Dearden

(See also Anatomy; Physiology; and Biology)

**★GC 1133 NATURE STUDY.** 4 degree credits, \$62.

Greater appreciation and enjoyment of wild plants and animals in their natural environment. Techniques of giving field instruction to groups of children and adults interested in nature. Identification, behavior, and relationships of living things. Individual projects may be assigned, such as writing nature poetry; drawing, sketching, or painting plants and animals; studying life histories of plants and

**new**

Symbols, abbreviations, off-campus class locations begin on page 401.

animals; cultivating house plants; and collecting insects or leaves. Lectures, laboratories, and field trips. (No prereq. Limited to 30 students)

Fall Qtr Sec 1 Sa—8 a.m.-10:30, FolH 102, Buonocore

**GC 1178 GEOLOGY IN MINNESOTA'S STATE PARKS.** 4 degree credits, \$62. (♦ \$31)

◆ Since many of Minnesota's state parks were chosen primarily for their interesting geologic features, they make up a good synopsis of the geology of the state. As many as possible of these will be studied along with the geologic principles required to explain them. A few field trips to parks near the Twin Cities may be possible. (No prereq)

Spring Qtr Sec 1 M—6:20-8:50, FolH 207, Harris


(See other Minnesota courses, page 313)

**GC 3114 PERSONAL ENVIRONMENTAL HEALTH.** 4 degree credits, \$62. (♦ \$31)

◆ Health as a product of harmony between man and environment: biological, physical, social, and ideological. Content selected from following topics: personal health—interaction of mind and body, progress in medicine; environmental health—impact of new pollutions, environment and personality, occupational health and industrial medicine, community health organizations and consumer costs, health in college community. (Prereq 45 cr or \$)

Winter Qtr Sec 1 Th—6:20-8:50, NH 207, Dearden


**★GC 3116 NUTRITION: FOOD, ITS USES AND ABUSES.** 4 degree credits, \$62. (♦ \$31)

◆  A descriptive course which is designed to deal with the principles of nutrition, food biological values, metabolism of nutrients, caloric content, vitamin, and mineral needs. In addition the course deals with the cultural concerns of procurement, distribution of nutrients, cultural uses of food and the cultural biases which often alter the quality and types of food consumed as it relates to the maintenance of the individual's health. (Prereq 45 cr or \$. Limited to 40 students)

Fall Qtr Sec 1 W—6:20-8:50, FolH 102, Liston

(See also IC 0015, Current Issues in Nutrition: Fallacies and Facts)

**★GC 3134 NATURE AND ITS IMPACT ON THE MIND OF MAN.** 4 degree credits, \$62.

◆  Begins with field trips to some exciting natural areas in University vicinity. Aspects of nature ranging from leaf patterns to bird songs to smells of different types of forest and prairies, which may be common to arts of various societies, studied and appreciated in their natural settings. Students try their skills at interpreting what they have sensed in visual and literary arts. Some attempt simple scientific experiments. Includes reading and discussing treatment of nature in selected literature and analysis of nature art in local galleries and slide collections. (Prereq 45 cr or \$. Limited to 30 students)

Spring Qtr Sec 1 T—5-7:30, FolH 102, Jefferson

**GC 3841 MINNESOTA RESOURCES.** 4 degree credits, \$62. (♦ \$31)

◆ Quality of life in contemporary Minnesota—future possibilities as well as present problems—analyzed in relation to major elements of current scene: resources, and use, and population trends. Discusses basic situation in such industries as transportation, mining, forestry, flour milling, and agriculture. Topics include urban development and environmental controversies involving pollution controls, new sources of energy, conservation, and utilization of undeveloped regions. Classes supplemented by field trips; independent investigations encouraged. (Prereq 45 cr or \$)

Fall Qtr Sec 1 W—6:20-8:50, NH 213, Steinhauser

(See other Minnesota courses, page 313)

## social and behavioral sciences

**★GC 1211 MAN IN SOCIETY: AN INTRODUCTION TO SOCIAL SCIENCE.** 4 degree credits, \$62. (♦ \$31)

◆ An interdisciplinary framework is employed to study society—its major components, origin, development and present structure, and the impact of these on

Symbols, abbreviations, off-campus class locations begin on page 401.

population groups and individuals. Some emphasis on scientific method and theories of social stratification and urbanization. (No prereq)

**Fall Qtr** Sec 1 T—7-9:30, Nicollet JHS 200, Burnsville (Limit 60 students)  
**Winter Qtr** Sec 2 W—7-9:30, Minnetonka HS 119, Neet (Limit 40 students)

**GC 1212 MAN IN SOCIETY: URBAN PROBLEMS.** 4 degree credits, \$62. (♦ \$31)

A problem-solving interdisciplinary approach to examine some major urban problems such as social class and poverty, social change, crime, and education. Emphasis on field-work and/or community activities. (No prereq)

**Winter Qtr** Sec 1 Th—6:20-8:50, PillsH 110, F Johnson

**GC 1221 MINNESOTA HISTORY.** 4 degree credits, \$62. (♦ \$31) (IS)

The land, people and institutions of Minnesota and the Upper Midwest are studied in the light of a history extending from the primitive and colorful life led by Indians, voyageurs and explorers to the complexities and opportunities of today. The double purpose of the course is to see how Minnesota came to be what it is, and to trace the growth of governmental functions and the course of political struggles from pioneer times to the present. (No prereq)

**Fall Qtr** Sec 1 T—6:20-8:50, NH 207, Moen  
**Winter Qtr** Sec 2 T—6:20-8:50, Jones 11, Moen

(See other Minnesota courses, page 313)

**GC 1236 UNITED STATES: CRIME AND DELINQUENCY.** 4 degree credits, \$3236. \$62. (♦ \$31)

Views crime and delinquency within setting of community. Various types of criminality and processes through which individuals become involved in delinquent behavior. Various methods of crime control and treatment. Students, especially those seeking careers in social services, build theoretic framework that guides functioning of correctional institutions. (No prereq)

**Fall Qtr** Sec 1 Th—6:20-8:50, NH 209, F Harris

**GC 1282 FIELDS OF APPLIED PSYCHOLOGY.** 4 degree credits, \$62. (♦ \$31)

Survey of use of psychological principles in study of human affairs. Examines contributions of psychological research as made in fields such as teaching and learning; mental retardation; personnel selection and training in industry; measurement and improvement of worker efficiency and morale; law, crime, and aggression; consumer research and advertising; and attitude and opinion formation and measurement. (No prereq)

**Fall Qtr** ★Sec 1 W—7-9:20, Irondale HS 105, New Brighton, Brothen  
 (Limit 40 students)  
**Winter Qtr** Sec 2 T—6:20-8:50, NH 107, Brothen

**GC 1285 SOCIAL SCIENCE: CULTURAL ANTHROPOLOGY.** 4 degree credits, \$62. (♦ \$31)

Human culture viewed as integrated system of behavior patterns learned and shared that serves to guide behavior of all members in a given society. Course aims at developing generalizations about influence of culture on human behavior by analyzing and comparing ways of life in particular cultures. Any and all cultures deemed worthy of such study. Power of culture to shape personality and power of persons to alter cultures. (No prereq)

**Fall Qtr** ★Sec 1 M—7-9:30, Elim Church, Robbinsdale; F Johnson  
 (Limit 35 students)  
**Winter Qtr** ★Sec 2 W—7-9:30, StP Capitol Complex, Square A  
 (Limit 50 students)  
**Spring Qtr** Sec 3 T—7-9:30, Buffalo JHS, team room; F Johnson

**★GC 1502 VOCATIONAL PLANNING.** 3 degree credits, \$46.50.

Deals with factors in appropriate occupational choice and adjustment, relationships between educational and vocational planning, and the methods of studying occupations. Group discussion, personal counseling, outside interviews, and laboratory study. Written projects applying techniques of vocational planning. (No prereq. Limited to 30 students)

**Spring Qtr** Sec 1 T—6:20-8:50, NH 111

Symbols, abbreviations, off-campus class locations begin on page 401.

★GC 1721 HOME LIFE: MARRIAGE AND FAMILY LIVING. 4 degree credits, \$62. (◆\$31)

To emphasize particular values of family life for individual and for society, course considers biological, psychological, and sociological foundations of the family. Some time devoted to study of adjustment and human relationships in student's present and future home life. Preparation for marriage, factors associated with success or failure in marriage, and problems of parenthood are considered. Specific topics include socialization, sexuality, mate selection, marriage, marital adjustment, contraception, reproduction, and parenthood. (No prereq)

Spring Qtr Sec 1 Th—7-9:30, Elim Church, Robbinsdale; Latts  
(Limit 50 students)  
Sec 2 Th—7-9:30, Hillside JHS, Maplewood, Thoen  
(Limit 60 students)

★GC 1722 HOME LIFE: PARENT-CHILD RELATIONSHIPS. 4 degree credits, \$62. (◆\$31)  
(IS)

Interdisciplinary course aimed at helping students to develop their own philosophy of childrearing—attitudes, principles, and perspectives that will guide them in their relations to their children and in performance of their parental responsibilities. Focus on helpful information related to crises of parenthood. Relevant research is used to emphasize principles of parent-child relations and to prepare students for tasks of parenthood. (No prereq. Limited to 60 students)

Winter Qtr Sec 1 M—7-9:30, Hillside JHS, Maplewood; Latts

(See also Family Social Science)

GC 3236 MINNESOTA CORRECTIONS: PENAL ALTERNATIVES. 4 degree credits, \$62.  
(◆\$31)

Penal system in Minnesota at adult level: St. Cloud, Stillwater, and Shakopee. Alternatives: diversion, probation, parole, half-way house, and other community-based programs. (Prereq 45 cr or §)

Spring Qtr Sec 1 Th—6:20-8:50, NH 213, Harris

(See other Minnesota courses, page 313)

GC 3282 PSYCHOLOGY APPLIED TO SOCIAL PROBLEMS. 4 degree credits, \$62. (◆\$31)

Social-psychological analysis of social problems in society today. Techniques used by psychologists to deal with such issues as population, urban life, violence, race, and sex roles. Students expected to gain knowledge of how to deal empirically with problems facing society. (Prereq 45 cr or §)

Spring Qtr Sec 1 W—6:20-8:50, NH 213, Brothen

★GC 3285 ANTHROPOLOGY OF THE CITY. 4 degree credits, \$62. (◆\$31)

Anthropologists' way of looking at urbanization as a process, and the city as a community made up of a variety of cultures. Ecological perspective as it relates to the whole of interaction between various cultures. Field study allows students to apply theories introduced at beginning to personal examination of one of the many cultures which make up the city in the 1970s. (Prereq 45 cr or §. Limited to 50 students)

Spring Qtr Sec 1 W—7-9:30, StP Capitol Complex, Square A, F Johnson

GC 3292 SOCIAL SCIENCE: URBAN PROBLEMS—GEOGRAPHIC PERSPECTIVES. 4 degree credits, \$62. (◆\$31)

Focus on Twin Cities metropolitan area, particularly the two central cities and selected suburban communities. Urbanization, cultural pluralism, environmental control, and shifting values among problems studied. Student committees examine a number of Twin Cities communities and present findings to class. Several other large American and foreign cities also studied. (Prereq 45 cr or §)

Spring Qtr Sec 1 M—6:20-8:50, NH 213, Steinhauser

★GC 3605 INTERVIEWING. 4 degree credits, \$62.

Recognition of interactive process of interview and roles of participants in dyad, exploration of a variety of communication patterns in interview context, and understanding how interviewer affects others (and how others affect him) in

Symbols, abbreviations, off-campus class locations begin on page 401.

goal-directed dyadic interaction. Students develop skills in general interviewing principles through actual and simulated situations. (No prereq. Limited to 30 students)

**Fall Qtr** Sec 1 T—6:20-8:50, FolH 105, Shapiro

**GC 3612 MENTAL HEALTH: PRINCIPLES AND PRACTICES.** 4 degree credits, \$62. (◆\$31)

Mental health as a social problem; changing needs and concepts of mental health; classification of mental and emotional disorders of constructs of psychodynamics; childrearing climates related to mental health and onset of personality problems; research finding on relative effectiveness of punitive and positive reinforcement techniques in inducing behavior change; rationales and principles of treatment practices in somatotherapy, sociotherapy, and psychotherapy; and emerging paraprofessional practices in handling problem clients. (Prereq 45 cr or #)

**Spring Qtr** Sec 1 T—6:20-8:50, MIRDH 213, Borow

**GC 3615 THE REHABILITATION PROCESS.** 4 degree credits, \$62.

For students interested in working in helping professions, particularly with handicapped people. General problems of the disabled and resources available to help those with special problems; mental health principles and their application in working with the disabled; mental, physical, and emotional factors which create barriers to individual's potential to become productive in social, educational, or work experience. Special emphasis on exploring mental retardation as problem for worker in helping professions and on progress made in educating and training the retarded. Aged and physically and emotionally handicapped persons also considered in terms of defining disabilities, potential for rehabilitation, and current methods and approaches used to help these individuals. To help student understand his own perceptions and attitudes relative to disability and rehabilitation, and to work toward better ways of using himself in rehabilitation processes. (Prereq 45 cr or #)

**Winter Qtr** Sec 1 T—6:20-8:50, MIRDH 213, Shapiro

**GC 3621 COUNSELING AND WORK REGARDING COMMUNITY RESOURCES.** 4 degree credits, \$62.

Intended primarily for persons interested or involved in human services work. Designed to develop student's skill in counseling clients regarding community resources: help develop understanding of human services available in Twin City area, and how services may interrelate; help in gaining insight of Human Services Generalist concept. Activities include small group interaction, video tape practice, interviewing, and assembly of agency resource book. (Prereq 45 cr or #)

**Fall Qtr** Sec 1 M—6:20-8:50, NH 207, Foat

**GC 3622 HUMAN SERVICES SEMINAR: INDIVIDUAL HELPING SKILLS.** 3 degree credits, \$48.50.

The goal of this course is to improve the skills of the student in the one-to-one situation. Some of the skills which are stressed are: 1) information-gathering techniques; 2) receptiveness to non-verbal cues from client; 3) awareness and use of own non-verbal behavior; and 4) influencing behavior. Because this is a skills based course, most of the class time is devoted to *practice* of these skills. (Prereq 3621)

**Winter Qtr** Sec 1 M—6:20-8:50, NH 107, Wilson

**GC 3623 HUMAN SERVICES SEMINAR: SMALL GROUP FACILITATION.** 3 degree credits, \$48.50.

The objectives of this course are: 1) to familiarize the student with significant elements of small-group development and function, and 2) to improve students skills in small-group situations. (Prereq 3622)

**Spring Qtr** Sec 1 M—6:20-8:50, NH 207, Wilson

**GC 3844 MINNESOTA PARTIES AND POLITICS.** 4 degree credits, \$62. (◆\$31)

Third-party movements and occasional radicalism appearing against background of strong liberal Republicanism are major aspects of politics in state noted for honest and enlightened government at home as well as for quality of leaders representing it in national councils. Topics include post-Civil War Republican

dominance, farm protest, Minnesota Progressivism, Farmer-Labor party in office, Republicanism reborn, advent of DFL, and contemporary seesaw. (Prereq 45 cr or \$)

Fall Qtr Sec 1 Th—6:20-8:50, NH 207, Hathaway

(See other Minnesota courses, page 313)

## genetics and cell biology (GCB)

*Nancy Hartung, Graduate Student in Genetics*  
*Pamela K. Kaufman, Postdoctorate Fellow in Genetics*

**GCB 3002 HUMAN GENETICS, SOCIAL AFFAIRS.** 3 degree credits, \$3022, Biol 1101, 3032. \$46.50; 4 degree credits with term paper, \$62.

For students in programs not directly related to biological sciences. Human genetics; study of individuals, families, populations, and races with respect to differences in intelligence, behavior, disease, and other matters of social concern. (No prereq)

Fall Qtr Sec 1 W—6:20-8:50, HSUnitA 2-580

★**GCB 3022 GENETICS.** 4 degree credits, \$62.

Mechanisms of heredity, their implications for biological populations and applications to practical problems. (Prereq Biol 1011 or \$. No credit will be given if the student has taken Biol 3032 for credit. Limited to 30 students)

**new**

Spring Qtr Sec 1 TTh—7-10:30, BioSci 70, StP Campus, Hartung, Kaufman

## geo-engineering (GeoE)

(See Civil and Mineral Engineering, page 100.)

## geography (Geog)

(See also General College natural science courses; and environmental concerns courses, page 318)

*John S. Adams, Associate Professor of Geography*  
*Russell B. Adams, Associate Professor of Geography*  
*Bonnie Barton, Assistant Professor of Geography*  
*Dwight A. Brown, Associate Professor of Geography*  
*Philip J. Gersmehl, Assistant Professor of Geography*  
*John Fraser Hart, Professor of Geography*  
*Mei-Ling Hsu, Professor of Geography*  
*Anthony C. Lea, Assistant Professor of Geography*  
*Fred E. Lukermann, Professor of Geography*  
*Cotton Mather, Professor of Geography*  
*Philip W. Porter, Professor of Geography*  
*John G. Rice, Associate Professor of Geography*  
*Joseph E. Schwartzberg, Professor of Geography*  
*Earl P. Scott, Assistant Professor of Geography*  
*Eric S. Sheppard, Assistant Professor of Geography*  
*Richard H. Skaggs, Associate Professor of Geography*  
*Roderick H. Squires, Assistant Professor of Geography*  
*Yi-Fu Tuan, Professor of Geography*  
*John W. Webb, Professor of Geography*

Symbols, abbreviations, off-campus class locations begin on page 401.



**Geog 1302 HUMAN GEOGRAPHY.** 4 degree credits, \$1301. \$62. (◆\$31)

Geography of population and principal ways of life; capacity of the earth for future population. (No prereq)

**Fall Qtr** Sec 1 **M**—6-8:50, BlegH 415

**Winter Qtr** Sec 2 **W**—6-8:50, BlegH 435

**Geog 1401 PHYSICAL GEOGRAPHY.** 5 degree credits, \$77.50. (◆\$38.75)

Major features of distribution patterns of climate, relief, vegetation and soils; regional differences in problems of physical development. (No prereq)

**Spring Qtr** Sec 1 **W**—6-9:20, AndH 230, Skaggs

**★Geog 1425 INTRODUCTION TO METEOROLOGY.** 4 degree credits, \$501.262. \$62.

Nature of the atmosphere and its behavior. 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. (No prereq. Limited to 35 students)

**Fall Qtr** Sec 1 **Lect T**—6:30-9, BlegH 435

**Lab Th**—6:30-8:10, BlegH 430

(See also GC 1111, Weather and Climate)

See TV course, **Geog 1973, Geography of the Twin Cities, page 312.**

**Geog 3101 GEOGRAPHY OF THE UNITED STATES AND CANADA.** 4 degree credits, \$62. (◆\$31) (IS)

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 415, Hart

**Geog 3131 MIDDLE AMERICA.** 4 degree credits, \$62. (◆\$31)

Physical and human geography. Both internal and external areal relationships. (No prereq)

**Spring Qtr** Sec 1 **M**—6-8:50, BlegH 435, Barrett

**Geog 3331 ECONOMIC GEOGRAPHY I: INTRODUCTORY.** 5 degree credits, \$77.50. (◆\$38.75)

Analysis of world patterns of economic activity; app circulation, and consumption; principles and potential of economic development. (No prereq)

**Fall Qtr** Sec 1 **T**—6-8:50, BlegH 415, Adams

**Geog 3421 CLIMATOLOGY..** 4 degree credits, \$62. (◆\$31)

World distribution of climatic elements, methods of arranging climatic data; climatic classifications and world distributions of climatic types; general circulation; climatic change and climatic fluctuations. (Prereq 1401 or ♯)

**Spring Qtr** Sec 1 **Th**—6-8:50, BlegH 445, Skaggs

**Geog 3531 QUANTITATIVE METHODS..** 4 degree credits, \$62. (◆\$31)

Applications of quantitative techniques to problems of classification, measurement, area association and sampling, and comparative regional analysis. Statistical sources commonly used by geographers. (No prereq)

**Spring Qtr** Sec 1 **T**—6-8:50, BlegH 420, Barton

**Geog 5101 HISTORICAL GEOGRAPHY OF NORTH AMERICA.** 4 degree credits, \$68. (◆\$34)

Sequential analysis of settlement and economy in changing environment and resource pattern of North America in the period of frontier interaction, 1500-1900. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 **T**—6-8:50, BlegH 435, Lukermann

Symbols, abbreviations, off-campus class locations begin on page 401.

**Geog 5171 WESTERN EUROPE.** 4 degree credits, \$68. (♦\$34)

Physical and human geography as a whole; intensive discussion of selected topics on British Isles, France, Low Countries, Rhine Basin. (Prereq 5 cr in geography or §. Qualified students may register for graduate credit at the University of Minnesota)



Fall Qtr Sec 1 Th—6-8:50, BlegH 415, Rice

**Geog 5353 SEMINAR FOR IN-SERVICE TEACHERS.** 4 degree credits, \$68.

Survey and discussion of the variety of materials, organizational approaches, and teaching strategies in geography available to secondary teachers of geography and social studies. (Prereq in-service teachers. Qualified students may register for graduate credit at the University of Minnesota)



Winter Qtr Sec 1 M—6-8:50, BlegH 435, Gersmehl

**Geog 8140 SEMINAR: AFRICA.** 3 degree credits, \$69.

(Prereq §. Qualified students may register for graduate credit at the University of Minnesota)



Winter Qtr Sec 1 T—8-10, SocSci 307, Porter/Scott

Spring Qtr Sec 2 T—8-10, SocSci 307, Porter/Scott

**Geog 8210 SEMINAR: SOUTH ASIA.** 3 degree credits, \$69.

(Prereq §. Qualified students may register for graduate credit at the University of Minnesota)



Winter Qtr Sec 1 M—7-9, SocSci 307, Schwartzberg

Spring Qtr Sec 2 M—7-9, SocSci 307, Schwartzberg

**Geog 8350 SEMINAR: SETTLEMENT AND POPULATION GEOGRAPHY.** 3 degree credits, \$69.

(Prereq §. Qualified students may register for graduate credit at the University of Minnesota)



Winter Qtr Sec 1 W—7:15-9, SocSci 307, Webb

Spring Qtr Sec 2 W—7:15-9, SocSci 307, Webb

**Geog 8400 SEMINAR: PHYSICAL GEOGRAPHY.** 3 degree credits, \$69.

(Prereq §. Qualified students may register for graduate credit at the University of Minnesota)



Fall Qtr Sec 1 T—7-9, BlegH 445, Gersmehl, Skaggs, Squires

*The following are day school classes in Geography in which Extension students may register. Registration for these is the same as for Extension classes. For course descriptions, see the current College of Liberal Arts Bulletin available from the Bulletin & Service Bureau (373-2153) room B-3 Morrill Hall.*

**Geog 1301 HUMAN GEOGRAPHY.** 6 degree credits, \$1302, \$93. (No prereq)

Fall Qtr Sec 1 MTWThF—9:15 a.m.-10, AndH 310

Sec 2 MTWThF—11:15 a.m.-12, AudCB 125

Winter Qtr Sec 3 MTWThF—10:15 a.m.-11

Sec 4 MTWThF—11:15 a.m.-12

Spring Qtr Sec 5 MTWThF—9:15 a.m.-10

Sec 6 MTWThF—10:15 a.m.-11

**Geog 1302 HUMAN GEOGRAPHY.** 4 degree credits, \$1301, \$62. (No prereq)

Fall Qtr Sec 3 MWF—9:15 a.m.-10, AndH 310

Sec 4 MWF—11:15 a.m.-12, AudCB 125

Winter Qtr Sec 5 MWF—10:15 a.m.-11

Sec 6 MWF—11:15 a.m.-12

Spring Qtr Sec 7 MWF—9:15 a.m.-10

Sec 8 MWF—10:15 a.m.-11

day/extension classes

Symbols, abbreviations, off-campus class locations begin on page 401.

- Geog 1401 PHYSICAL GEOGRAPHY.** 5 degree credits, \$77.50. (No prereq)  
 Fall Qtr    Sec 2   MWF—10:15 a.m.-11, AndH 210  
               Sec 3   MWF—11:15 a.m.-12, AndH 210  
 Winter Qtr   Sec 4   MWF—10:15 a.m.-11  
 Spring Qtr   Sec 5   MWF—9:15 a.m.-10
- Geog 1425 INTRODUCTION TO METEOROLOGY.** 4 degree credits, \$Soils 1262.  
 \$62. (No prereq)  
 Fall Qtr    Sec 2   MWF—7:55 a.m.-8:40 (lab arr) So 115, StP Campus
- Geog 1973 GEOGRAPHY OF THE TWIN CITIES.** 4 degree credits, \$3973, \$62. (No  
 prereq)  
 Fall Qtr    Sec 1   TTh—11:15 a.m.-12:30, AndH 350
- Geog 3001 INTRODUCTION TO GEOGRAPHIC INQUIRY.** 4 degree credits, \$62.  
 (No prereq)  
 Fall Qtr    Sec 1   TTh—12:45-2, BlegH 340  
 Winter Qtr   Sec 2   TTh—12:45-2
- Geog 3101 GEOGRAPHY OF THE UNITED STATES AND CANADA.** 4 degree  
 credits, \$62. (No prereq)  
 Spring Qtr   Sec 2   MWF—11:15 a.m.-12
- Geog 3111 GEOGRAPHY OF MINNESOTA.** 4 degree credits, \$62. (IS) (No prereq)  
 Winter Qtr   Sec 1   TTh—10:15 a.m.-11:30
- Geog 3131 MIDDLE AMERICA.** 4 degree credits, \$62. (No prereq)  
 Winter Qtr   Sec 2   MWF—12:15-1
- Geog 3141 AFRICA.** 4 degree credits, \$62. (No prereq. May be applied toward the  
 CLA foreign language requirement, Route II for Swahili [see page  
 359].)  
 Fall Qtr    Sec 1   MWF—10:15 a.m.-11, BlegH 340
- Geog 3161 EUROPE.** 4 degree credits, \$62. (No prereq)  
 Fall Qtr    Sec 1   TTh—11:15 a.m.-12:30, BlegH 415
- Geog 3181 SOVIET UNION.** 4 degree credits, \$62. (IS) (No prereq. May be applied  
 toward the CLA foreign language requirement, Route II for Russian  
 [see page 359].)  
 Winter Qtr   Sec 1   MWF—11:15 a.m.-12
- Geog 3211 EAST ASIA.** 4 degree credits, \$5211, \$62. (No prereq. May be applied  
 toward the CLA foreign language requirement, Route II for Chinese and  
 Japanese [see page 359].)  
 Fall Qtr    Sec 1   TTh—12:45-2, BlegH 440
- Geog 3212 SOUTH ASIA.** 4 degree credits, \$5212, \$62. (No prereq)  
 Fall Qtr    Sec 1   MWF—11:15 a.m.-12, BlegH 435
- Geog 3311 MAPS AND MAP INTERPRETATION.** 4 degree credits, \$62. (Prereq  
 soph, 5 cr in geography or \$. A joint Day/Extension class)  
 Fall Qtr    Sec 1   TTh—9:45 a.m.-11, BlegH 415
- Geog 3321 POLITICAL GEOGRAPHY.** 4 degree credits, \$62. (No prereq)  
 Spring Qtr   Sec 1   MWF—9:15 a.m.-10
- Geog 3331 ECONOMIC GEOGRAPHY.** 4 degree credits, \$62. (No prereq)  
 Fall Qtr    Sec 2   MWF—9:15 a.m.-10, BlegH 415
- Geog 3341 INDUSTRIALIZATION AND WORLD TRADE.** 4 degree credits, \$62.  
 (Prereq 3331 or \$)  
 Winter Qtr   Sec 1   MWF—9:15 a.m.-10

Symbols, abbreviations, off-campus class locations begin on page 401.

- Geog 3343 LAND USE ECOLOGY.** 4 degree credits, \$62. (No prereq)  
 Winter Qtr Sec 1 MWF—12:15-1
- Geog 3344 THE LAND ETHIC.** 4 degree credits, \$62. (No prereq)  
 Spring Qtr Sec 1 MWF—12:15-1
- Geog 3345 ENERGY AND MINERALS.** 4 degree credits, \$62. (No prereq)  
 Fall Qtr Sec 1 MWF—10:15 a.m.-11, BlegH 435
- Geog 3351 GEOGRAPHY OF FOOD PRODUCTION.** 4 degree credits, \$62. (No prereq)  
 Winter Qtr Sec 1 MWF—10:15 a.m.-11
- Geog 3361 ENVIRONMENTAL EVALUATION AND ADAPTATION.** 4 degree credits, \$62. (No prereq)  
 Fall Qtr Sec 1 MWF—10:15 a.m.-11, BlegH 415
- Geog 3371 URBAN GEOGRAPHY.** 4 degree credits, \$62. (No prereq)  
 Fall Qtr Sec 1 WF—8:15 a.m.-10, BlegH 155  
 Winter Qtr Sec 2 WF—8:15 a.m.-10
- Geog 3378 MODERNIZATION AND THE THIRD WORLD.** 4 degree credits, \$62. (No prereq)  
 Winter Qtr Sec 1 TTh—9:45 a.m.-11
- Geog 3381 POPULATION GEOGRAPHY.** 4 degree credits, \$62. (No prereq)  
 Winter Qtr Sec 1 TTh—11:15 a.m.-12:30
- Geog 3431 PLANT AND ANIMAL GEOGRAPHY.** 4 degree credits, \$62. (No prereq)  
 Fall Qtr Sec 1 MWF—12:15-1, AndH 230
- Geog 3441 LANDFORM GEOGRAPHY.** 4 degree credits, \$62. (No prereq)  
 Winter Qtr Sec 1 MWF—11:15 a.m.-12
- Geog 3451 SOILS GEOGRAPHY.** 4 degree credits, \$Soils 5512, \$62. (No prereq)  
 Spring Qtr Sec 1 MWF—11:15 a.m.-12
- Geog 3511 INTRODUCTION TO CARTOGRAPHY.** 4 degree credits, \$62. (Prereq 5 cr in geography or §)  
 Fall Qtr Sec 1 TTh—10:15 a.m.-11 (lab arr.)  
 Winter Qtr Sec 2 TTh—9:15 a.m.-10 (lab arr.)  
 Spring Qtr Sec 3 TTh—9:15 a.m.-10 (lab arr.)
- Geog 3531 QUANTITATIVE METHODS.** 4 degree credits, \$62. (No prereq)  
 Fall Qtr Sec 2 TTh—9:45 a.m.-11, BlegH 340
- Geog 3950 UNDERGRADUATE SEMINAR.** 4 degree credits, \$62. (Prereq 10 cr in geography and §)  
 Spring Qtr Sec 1 T—11:15 a.m.-3
- Geog 3973 GEOGRAPHY OF THE TWIN CITIES.** 4 degree credits, \$1973, \$62. (No prereq)  
 Fall Qtr Sec 1 TTh—11:15 a.m.-12:30, AndH 350
- Qualified students may register for graduate credit for the following 5- and 8-level courses at the University of Minnesota.*
- Geog 5001 GEOGRAPHICAL ANALYSIS I.** 4 degree credits, \$68. (No prereq)  
 Winter Qtr Sec 1 TTh—9:45 a.m.-11

Symbols, abbreviations, off-campus class locations begin on page 401.

- Geog 5102 HISTORICAL GEOGRAPHY OF NORTH AMERICA.** 4 degree credits, \$68. (No prereq)  
Spring Qtr Sec 1 MWF—8:15 a.m.-9
- Geog 5112 WESTERN UNITED STATES.** 4 degree credits, \$68. (No prereq)  
Fall Qtr Sec 1 TTh—9:15 a.m.-10, BlegH 440
- Geog 5113 CANADA AND ALASKA.** 4 degree credits, \$68. (No prereq)  
Spring Qtr Sec 1 TTh—9:15 a.m.-10:30
- Geog 5131 COLONIAL MEXICO AND THE CARIBBEAN.** 4 degree credits, \$68. (No prereq)  
Spring Qtr Sec 1 MWF—12:15-1
- Geog 5132 SOUTH AMERICA.** 4 degree credits, \$68. (No prereq)  
Spring Qtr Sec 1 TTh—11:15 a.m.-12
- Geog 5142 GEOGRAPHY OF EAST AFRICA.** 4 degree credits, \$68. (No prereq)  
Winter Qtr Sec 1 MWF—10:15 a.m.-11
- Geog 5143 GEOGRAPHY OF WEST AFRICA.** 4 degree credits, \$68. (No prereq)  
Spring Qtr Sec 1 MWF—10:15 a.m.-11
- Geog 5171 WESTERN EUROPE.** 4 degree credits, \$68. (Prereq 5 cr in geography or §)  
Spring Qtr Sec 2 TTh—10:15 a.m.-11:30
- Geog 5173 NORDEN.** 4 degree credits, \$68. (No prereq. May be applied toward the CLA foreign language requirement, Route II for Finnish, Danish, Norwegian, Swedish [see page 359].)  
Spring Qtr Sec 1 TTh—1:15-2:30
- Geog 5211 EAST ASIA: REGIONAL ANALYSIS.** 4 degree credits, \$3211, \$68. (Prereq 5 cr in geography or §. May be applied toward the CLA foreign language requirement, Route II for Chinese and Japanese [see page 359].)  
Fall Qtr Sec 1 TTh—12:45-2, BlegH 425
- Geog 5212 SOUTH ASIA.** 4 degree credits, \$3212, \$68. (No prereq)  
Fall Qtr Sec 1 MWF—11:15 a.m.-12, BlegH 435
- Geog 5322 POLITICAL GEOGRAPHY OF ASIA.** 4 degree credits, \$68. (Prereq 3321 or a regional course on any part of Asia or §)  
Winter Qtr Sec 1 MWF—9:15 a.m.-10
- Geog 5372 METROPOLITAN ANALYSIS I.** 4 degree credits, \$68. (No prereq)  
Fall Qtr Sec 1 WF—11:15 a.m.-1, BlegH 135
- Geog 5373 METROPOLITAN ANALYSIS II.** 4 degree credits, \$68. (No prereq)  
Winter Qtr Sec 1 WF—11:15 a.m.-1
- Geog 5381 SERVICES AND LOCATION THEORY.** 4 degree credits, \$68. (Prereq 3331 or §)  
Spring Qtr Sec 1 TTh—10:15 a.m.-11:30
- Geog 5391 RURAL GEOGRAPHY.** 4 degree credits, \$68. (No prereq)  
Fall Qtr Sec 1 TTh—11:15 a.m.-12:30, BlegH 440
- Geog 5393 THE LOOK OF THE LAND.** 4 degree credits, \$68. (No prereq)  
Fall Qtr Sec 1 MWF—11:15 a.m.-1, BlegH 215
- Geog 5424 QUATERNARY CLIMATES.** 4 degree credits, \$68. (Prereq §)  
Winter Qtr Sec 1 MWF—9:15 a.m.-10

- Geog 5444 GEOGRAPHY OF WATER RESOURCES.** 4 degree credits, \$68. (Prereq 2 courses in physical geography or §)  
 Spring Qtr Sec 1 TTh—1:15-2:30
- Geog 5512 CARTOGRAPHY: TOPICS—MAP MAKING AND MAP USE.** 4 degree credits, \$68. (Prereq 3511, 3531, or §)  
 Spring Qtr Sec 1 TTh—11:15 a.m.-12:30
- Geog 5522 COMPUTER MAPPING.** 4 degree credits, \$68. (Prereq basic knowledge of Fortran and 3511 or §)  
 Fall Qtr Sec 1 MWF—1:15-2, BlegH 340
- Geog 5531 QUANTITATIVE RESEARCH DESIGN.** 4 degree credits, \$68. (Prereq 3531, Soc 3801, or §)  
 Winter Qtr Sec 1 TTh—10:15 a.m.-11:30
- Geog 5701 FIELD RESEARCH (Twin City Metropolitan Area and environs).** 4 degree credits, \$68. (Prereq 12 credits in geography and §)  
 Spring Qtr Sec 1 Th—3:15-5 (plus field trips)
- Geog 5801 DEVELOPMENT OF GEOGRAPHIC THOUGHT.** 4 degree credits, \$3081, \$68. (Prereq sr, 15 cr in geography)  
 Fall Qtr Sec 1 MWF—8:15 a.m.-9, BlegH 415
- Geog 5811 ENVIRONMENTALISM, ENVIRONMENT, AND THE QUALITY OF LIFE.** 4 degree credits, \$68. (Prereq §)  
 Winter Qtr Sec 1 MWF—1:15-2
- Geog 5849 SPACE AND PLACE: A GEOGRAPHY OF EXPERIENCE.** 4 degree credits, \$68. (No prereq)  
 Winter Qtr Sec 1 MWF—11:15 a.m.-12
- Geog 5900 TOPICS IN GEOGRAPHY—PLANTATION ECONOMIES.** 4 degree credits, \$Hist 5420, \$68. (Prereq sr or grad and §)  
 Spring Qtr Sec 1 Th—3:15-5
- Geog 8300 GEOGRAPHICAL WRITING.** 3 degree credits, \$69. (Prereq §)  
 Winter Qtr Sec 1 F—11:15 a.m.-3
- Geog 8310 SEMINAR: CULTURAL GEOGRAPHY.** 3 degree credits, \$69. (Prereq §)  
 Fall Qtr Sec 1 M—1:15-3, BlegH 350  
 Winter Qtr Sec 2 M—11:15 a.m.-3  
 Spring Qtr Sec 3 M—11:15 a.m.-3
- Geog 8340 SEMINAR: LAND USE PLANNING.** 3 degree credits, \$69. (Prereq §)  
 Winter Qtr Sec 1 W—2-5  
 Spring Qtr Sec 2 W—2-5
- Geog 8440 PLEISTOCENE BIOGEOGRAPHY.** (Cr arr, \$23 per cr. (Prereq 5445 or §)  
 Winter Qtr Sec 1 W—2-4  
 Spring Qtr Sec 2 W—2-4
- Geog 8800 SEMINAR: DEVELOPMENT OF GEOGRAPHIC THOUGHT.** 3 degree credits, \$69. (Prereq §)  
 Winter Qtr Sec 1 T—2:15-4
- Geog 8850 SEMINAR: ATTITUDES TO ENVIRONMENT.** 3 degree credits, \$69. (Prereq §)  
 Spring Qtr Sec 1 M—1:15-3

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**Geog 8970 DIRECTED READINGS.** 1-5 degree credits, \$23 per cr. (No prereq)

Fall Qtr	Sec 1	arr.
Winter Qtr	Sec 2	arr.
Spring Qtr	Sec 3	arr.

**Geog 8990 RESEARCH PROBLEMS IN GEOGRAPHY.** Cr arr, \$23 per cr. (No prereq)

Fall Qtr	Sec 1	arr.
Winter Qtr	Sec 2	arr.
Spring Qtr	Sec 3	arr.

## geology and geophysics (Geo)

(See also GC 1178, Geology in Minnesota's State Parks)

*E. Calvin Alexander, Assistant Professor of Geology and Geophysics**Clement G. Chase, Associate Professor of Geology and Geophysics**George H. Shaw, Assistant Professor of Geology and Geophysics**Robert E. Sloan, Professor of Geology and Geophysics**James Stout, Associate Professor of Geology and Geophysics**Paul W. Weiblen, Associate Professor of Geology and Geophysics***IC 0006 RECENT SHIFTS IN PREHISTORIC SUBJECTS: AN OVERVIEW OF MODERN GEOLOGY.** No credit. Chase, Sloan, Stout

See Informal Courses, page 198.

**Geo 1001 PHYSICAL GEOLOGY.** 4 degree credits, \$62 plus \$3 course fee. Total \$65. (IS)

A first course in geology for science majors and an introduction to scientific methods and the nature of the earth for others. Survey of the main features of the physical world and of the processes that have evoked them. (No prereq. Fall Semester meets concurrently with 5051)

<b>Fall Sem</b>	Sec 1	<b>Lect T</b> —6:20-8:00, PillsH 110, Weiblen
		<b>Lab T</b> —8:10-9:30, ForH 180

<b>Spring Sem</b>	Sec 2	<b>Lect M</b> —6:20-8:00, PillsH 110, Alexander
		<b>Lab M</b> —8:10-9:30, ForH 180

**Geo 1002 HISTORICAL GEOLOGY.** 4 degree credits, \$62 plus \$3 course fee. Total \$65.

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)

<b>Spring Sem</b>	Sec 1	<b>Lect T</b> —6:20-8:00, PillsH 110, Sloan
		<b>Lab T</b> —8:10-9:30, ForH 85

**Geo 1008 GEOLOGY AND MAN.** 4 degree credits, \$1001. \$62.

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)

<b>Fall Sem</b>	Sec 1	<b>Lect M</b> —6:20-8, PillsH 110, Shaw
		<b>Lab M</b> —8:10-9:30, ForH 180

(See other environmental concerns courses, page 318)

**Geo 3103 STRUCTURAL GEOLOGY.** 5 degree credits. To be offered 1977-78 and alternate years.**Geo 3401 INTRODUCTORY MINERALOGY.** 5 degree credits, \$77.50. (♦\$38.75)

Introduction to crystallography; crystal chemistry, and crystal physics. Physical and chemical properties, crystal structures, and chemical equilibria of the major

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mineral groups. Laboratory includes crystallographic polarizing microscope, X-ray powder diffraction exercises, and hand specimen mineral identification. (Prereq 1001 or 1111 or §, 1 term college chemistry, Math 1221. Meets concurrently with 5004.)

Winter Qtr Sec 1 Lect TTh—6:20-8, PillsH 100, Shaw  
Lab TTh—8:15-9:30, PillsH 100

**Geo 5002 STRUCTURAL GEOLOGY.** 4 degree credits. To be offered 1977-78 and alternate years.

**Geo 5004 MINERALOGY.** 4 degree credits, \$3401. \$68.

See description for 3401. (Prereq 1001 or §. Meets concurrently with 3401. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 Lect TTh—6:20-8, PillsH 100, Shaw  
Lab TTh—8:15-9:30, PillsH 100

**Geo 5051 PHYSICAL GEOLOGY FOR TEACHERS.** 4 degree credits, \$1001, 1003, 1111. \$68 plus \$3 course fee. Total \$71.

An introduction to the scientific methods and the nature of the earth. Survey of the main features of the physical world and of the processes that have evoked them. (Prereq 1 term college chemistry or physics; only for students holding degrees in education. Meets concurrently with 1001 fall semester course. Qualified students may register for graduate credit at the University of Minnesota)

Fall Sem Sec 1 Lect T—6:20-8, PillsH 110, Weiblen  
Lab T—8:10-9:30, ForH 180

(See also Education)

**Geo 5052 HISTORICAL GEOLOGY FOR TEACHERS.** 4 degree credits, \$1002, 1004, 1112. \$68 plus \$3 course fee. Total \$71.

An introduction to the origin of the earth, the physical evolution of its crust through geological time and the biological changes that occurred during its history. (Prereq 1001 or 1111 or 5051 or §; only for students holding degrees in education. Meets concurrently with 1002. Qualified students may register for graduate credit at the University of Minnesota)

Spring Sem Sec 1 Lect T—6:20-8, PillsH 110, Sloan  
Lab T—8:10-9:30, ForH 85

**Geo 5151 INTRODUCTION TO PALEONTOLOGY.** 5 degree credits, \$85. (IS)

Morphology and classification of major fossil groups. (Prereq 1001 or 1112 or §. Qualified students may register for graduate credit at the University of Minnesota)

Fall Sem Sec 1 Lect W—6:20-8, PillsH 110, Sloan  
Lab W—8-10, PillsH 105

**new**

## german (Ger)

(See other ethnic studies courses, page 300)

*Gary Alley, Assistant Professor of German*  
*Frank D. Hirschbach, Professor of German*  
*Anatole Liberman, Associate Professor of German*  
*Mark Lowry, Professor of German*  
*Thomas Plummer, Associate Professor of German*  
*Wolfgang Taraba, Professor of German*  
*Ray Wakefield, Assistant Professor of German*  
*Gerhard H. Weiss, Professor of German*

Language laboratory fees are charged for courses in which use of the lab is required or recommended. Cassette tapes are available to Extension Classes

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students on a take-home basis. Students can pick up tapes at the Learning Resources Center on the second floor of Walter Library or the second floor of Temporary South of Coffey on the St. Paul Campus. Students must present a fee statement when checking out tapes. Rental costs are covered by the special fees paid with tuition.

Learning Resource Center hours are: 8 a.m.-10 p.m., Monday-Thursday; 8 a.m.-6 p.m., Friday; 9 a.m.-6 p.m., Saturday; Sunday hours being planned.

The following non-language classes may be applied toward the CLA foreign language requirement, Route II (see page 359); Ger 3603, 3604, 3610, 5611.

### BEGINNING GERMAN. 1101-1102-1103

5 degree credits per course. Provides basic experience in speaking, reading, and understanding the German language and its structure through the acquisition of basic patterns of speech and later through the reading and analysis of texts. The course will be reinforced with programmed materials which will be available to students in the language laboratory. The continuation course is Ger 1301, which is a prerequisite for 3xxx-level German courses.

**Ger 1101-1102-1103** **BEGINNING GERMAN.** 5 degree credits each semester, \$1001-1002-1003 or \$1110. \$77.50 plus \$5 course fee. Total \$82.50 each semester. (♦\$38.75 plus \$5 course fee. Total \$43.75) (IS)

Structure, pronunciation, reading, and oral comprehension by learning the patterns of basic German (see note above). (No prereq for 1101; 1101 or 1 year high school German or 5 cr 1110 for 1102; 1102 or 2 years high school German or 10 cr 1110 for 1103)

<b>Fall Sem</b>	<b>1101</b>	Sec 1	M—6:20-9:20, FolH 204, Weiss
		Sec 2	Th—6:20-9:20, FolH 205, Alley
<b>Spring Sem</b>	<b>1102</b>	Sec 3	M—6:20-9:20, FolH 207, Taraba
		Sec 4	M—6:20-9:20, FolH 205, Weiss
		Sec 5	Th—6:20-9:20, FolH 205, Alley

**★Ger 1110 INDIVIDUALIZED BASIC GERMAN.** 3-15 degree credits, \$15.50 per credit plus \$5 course fee.

Individualized instruction covering material of Ger 1001-1002-1003 or 1101-1102-1103. Students work at own speed with instructor guidance completing one unit at a time. Testing for all units is available at any time. Credits are awarded at the end of the quarter upon completion of appropriate number of units. (Prereq \$\$. Limited to 25 students)

<b>Fall Qtr</b>	Sec 1	W—6:20-8:50, WaLib LRC, Wakefield
<b>Winter Qtr</b>	Sec 2	W—6:20-8:50, WaLib LRC, Wakefield
<b>Spring Qtr</b>	Sec 3	W—6:20-8:50, WaLib LRC, Wakefield

**Ger 1301 INTERMEDIATE GERMAN.** 5 degree credits, \$77.50. (♦\$38.75) (IS)

Selected reading from literature, elementary composition. (Prereq 1003, 1103 or 15 cr 1110 or 3 yrs high school German)

**Spring Sem** Sec 1 M—6:20-9:20, FolH 103, Taraba

**Ger 3603 GERMAN LITERATURE IN TRANSLATION: MODERN PERIOD.** 4 degree credits, \$62. (♦\$31)

Representative works from the modern period, related to other literatures. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 359])

**Fall Qtr** Sec 1 W—6:20-9, FolH 202, Taraba

**Ger 3604 GERMAN LITERATURE IN TRANSLATION AND THE FILM.** 4 degree credits, \$62. (♦\$31)

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

Symbols, abbreviations, off-campus class locations begin on page 401.

cinema. It will consider the writing of such authors as Thomas Mann, Franz Kafka, Günter Grass, and Peter Weiss. The premise that a history of a people is reflected in its art underlies the broad aims of the course; the analysis of the irrational in modern German culture, attitudes toward authority and violence, expressions of guilt, and the plight of the artist. Requires no knowledge of German. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 359].)

Fall Qtr Sec 1 M—6:20-9:40, HSUnitA 2-620, Plummer

(See other film courses page 291)

**Ger 3610 MODERN GERMAN AUTHORS IN TRANSLATION: FRIEDRICH NIETZSCHE.** 4 degree credits, \$62. (♦\$31)

A study in depth of selected works of Friedrich Nietzsche, including *The Genealogy of Morals*, *Beyond Good and Evil*, *Thus Spoke Zarathustra*, *The Antichrist*, and *Ecce Homo*. Nietzsche's works viewed both as aesthetic documents and as reflections of the German and European ethos of the 19th century. Not open for credit toward a German major. Requires no knowledge of German. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 359].)

Winter Qtr Sec 1 W—6:20-9, FolH 201, Taraba

**Ger 3610 MODERN GERMAN AUTHORS IN TRANSLATION: FRANZ KAFKA.** 4 degree credits, \$62. (♦\$31)

A study in depth of selected works of Franz Kafka, including "Letter to His Father," "The Metamorphosis," "The Penal Colony," *The Trial*, *The Castle*. Kafka's works viewed both as aesthetic documents and as reflections of the German and European ethos of the 20th century. Not open for credit toward a German major. Requires no knowledge of German. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 359].)

Spring Qtr Sec 2 W—6:20-9, FolH 201, Taraba

**Ger 5611 GERMANIC HEROIC POETRY IN TRANSLATION.** 4 degree credits, \$68. (♦\$34)

This course will provide an overview of all Germanic heroic poetry (Old English, Old Norse and Old High German). The following problems will be explored: definition of the genre, the function of heroic poetry in Teutonic society, the ethical norms, the historicity of Old Germanic epics and the heroic poems as works of art. Requires no knowledge of German. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 359].) Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 T—6:20-9, FolH 202, Liberman

## reading german

Ger 0221 and 0222 are specifically designed for individuals who desire only a reading knowledge of the language. The German language requirement for an advanced degree may also be satisfied by a program of study based on Ger 0221 and 0222. Ger 0221 or equivalent (two quarters of beginning German or two years of high school German) is a prerequisite for Ger 0222. Students may take a final examination at the conclusion of Ger 0222. If the student achieves a grade of "B" or better in this examination, the German Department will certify to the Graduate School a reading knowledge of German. Graduate students should check with their advisers for specific language requirements in their field of study.

**Ger 0221 READING GERMAN.** No credit, \$46.50. (IS)

This course is designed to help students acquire a reading knowledge of basic German as rapidly as possible. (The course itself is not intended to prepare a student for the Graduate German Reading Examination; it is merely the first step toward that objective.) Ger 0221 assumes no knowledge of German on the part of the student. Grammar is reduced to an essential minimum. The course progresses from intensive reading of simple, graded material to selections of moderate difficulty. Vocabulary building and analysis of compound words are emphasized. (No prereq.)

Fall Sem Sec 1 M—6:20-8, FolH 303, Hirschbach

Symbols, abbreviations, off-campus class locations begin on page 401.

**Ger 0222 READING GERMAN.** No credit, \$62. (IS)

This course is designed to give students experience in intensive reading of German literary texts. This experience should enable graduate students to satisfy departmental requirements for an advanced degree. The German Department will certify to the Graduate School a reading knowledge of German of those taking the final examination and achieving a grade of "B" or better. (Prereq 0221 or 2 quarters of beginning German or 2 years of high school German)

**Spring Sem** Sec 1 **M**—6:20-8:35, FoIH 209, Plummer

German 0221 and 0222 are also offered as Summer Extension Classes.

**greek (Grk)**

*Theofanis Stavrou, Professor of History*

*David Wigtil, Teaching Associate in Classics*

The following non-language Extension classes may be applied toward the CLA foreign language requirement, Route II (see page 359): Clas 1019, 1042, 1043, 3071, 3082, 5004, 5008, 5071, 5082; Hist 1052, 3052; Hum 1011; Phil 3001, 3002.

**Grk 1101-1102 BEGINNING CLASSICAL GREEK.** 5 degree credits each semester, \$77.50 each semester. (IS)

Language structure in context of graded reading materials. Selections from **New Testament**, Aesop, Xenophon, and Plato. The approach is via Biblical Greek, with computer-assisted drills and review. Upon completion of 1102, students will be able to read in the **New Testament** on their own. (No prereq for 1101; 1101 or 1102 for 1102)

**new**

**Fall Sem 1101** Sec 1 **T**—6:20-9:05, FoIH 307, Wigtil

**Spring Sem 1102** Sec 2 **T**—6:20-9:05, FoIH 307, Wigtil

**modern greek (MdGk)****MdGk 1101-1102-1103 BEGINNING MODERN GREEK.** 5 degree credits each quarter, \$FS 3001, 3002, 3003. \$77.50 each quarter.

A concentrated study of the fundamentals—reading, writing and conversation—of modern Greek. The emphasis will be on the language as a key to understanding modern Greek culture and society. The language textbook will be supplemented with readings from a variety of modern Greek sources. The class is offered primarily for Spanners going to Greece but it is open to others. (No prereq for 1101; 1101 for 1102; 1102 for 1103. Meets concurrently with FS 3001, 3002, 3003)

**new**

**Fall Qtr 1101** Sec 1 **Sa**—9 a.m.-1, BlegH 435, Stavrou

**Winter Qtr 1102** Sec 2 **Sa**—9 a.m.-1, BlegH 435, Stavrou

**Spring Qtr 1103** Sec 3 **Sa**—9 a.m.-1, BlegH 435, Stavrou

**health**

(See School Health Education; Public Health)

# health, environmental

(See Public Health)

# hebrew

(See Middle Eastern Studies)

# history (Hist)

(See also General College social and behavioral science courses; and non-credit Informal Courses, page 196)

*Bernard S. Bachrach, Professor of History*  
*James K. Benson, Instructor in History*  
*Hyman Berman, Professor of History*  
*Winifred D. Bolin, Instructor in History*  
*Carol Gold, Assistant Professor of History*  
*George Green, Associate Professor of History*  
*John R. Howe, Professor of History*  
*Allen F. Isaacman, Associate Professor of History*  
*Tom B. Jones, Regents' Professor of History*  
*Thomas Kelly, Associate Professor of History*  
*David Kopf, Professor of History*  
*Stanford E. Lehmborg, Professor of History*  
*Byron K. Marshall, Associate Professor of History*  
*Robert Meyerson, Assistant Professor of History*  
*Kenneth Moss, Instructor in History*  
*David W. Noble, Professor of History*  
*Jonathan Paradise, Assistant Professor of Hebrew*  
*Daniel D. Reisman, Assistant Professor of Near and Middle Eastern Studies*  
*Richard Rudolph, Associate Professor of History*  
*Winifred Seelig, Assistant Professor of History*  
*Marcia Smith, Instructor in History*  
*Theofanis G. Stavrou, Professor of History*  
*Rudolph Vecoli, Professor of History*  
*William E. Wright, Professor of History*

**Proseminar courses 55xx-59xx:** Tentatively qualified students may be permitted to register through Extension Classes for some proseminars numbers 55xx-59xx scheduled by the Dept. of History to meet after 3 p.m. Consent of instructor required. Check with Extension Classes registration office, 101 Wesbrook Hall (373-3195) to see which proseminars are available each quarter.

## **A MAJOR IN HISTORY CAN BE COMPLETED IN THE EVENING.**

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

## **B.A. Major Sequence.**

Required Preparatory Courses

Four introductory (1xxx-level) history courses (completed in first 2 years when possible). Juniors and seniors may substitute 3xxx-5xxx-level equivalent courses.

Language Requirement (for students admitted to majors after winter 1973) Route I; or Route II plus a year of a second foreign language (or validation at that level); or

Symbols, abbreviations, off-campus class locations begin on page 401.

Route II plus three courses from Soc 3801, 3802, 3803, PsyF 5120, 5122, 5510, all statistics courses, all mathematics courses above 1141, all CICS courses above 3101.

### Major Requirements

Minimum of seven 3xxx-5xxx-level history courses (four of them in area of concentration).  
3961 (major paper)

### Distribution of the 12 Required Courses

Two or more from "modern" and "premodern" categories; at least one from each of three geographical areas.

Prospective history majors should obtain from the department office, the Description of the Undergraduate History Major, which lists "modern" and "premodern" courses and suggests areas of concentration. It also gives information about alternatives to some of the requirements.

Students who plan advanced work should acquire a reading knowledge of French, German, or other appropriate language in early undergraduate years.

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

**Hist 1001, 1002, 1003 INTRODUCTION TO MODERN EUROPEAN HISTORY.** 4 degree credits each quarter, §3001, 3002, 3003. \$62 each quarter. (♦\$31 each quarter) (IS)

◆ **1001:** Development of western European civilization to 1715. **1002:** Revolution, liberalism, and nationalism to 1870. **1003:** 1870 to recent times. (No prereq. Meet concurrently with 3001, 3002, 3003)

<b>Fall Qtr</b>	<b>1001</b>	Sec 1	<b>W</b> —6:20-8:50, AndH 210, Rudolph
<b>Winter Qtr</b>	<b>1002</b>	Sec 2	<b>W</b> —6:20-8:50, BlegH 245, Rudolph
<b>Spring Qtr</b>	<b>1003</b>	Sec 3	<b>W</b> —6:20-8:50, BlegH 240, Wright

**Hist 1051, 1052, 1053 ANCIENT CIVILIZATION.** 3 degree credits each quarter, §3051, 3052, 3053. \$46.50 each quarter. (♦\$23.25) (IS)

◆ **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 and 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 for Greek (see page 359) **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 for Latin (see page 359). (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)

<b>Fall Qtr</b>	<b>1051</b>	Sec 1	<b>Th</b> —6:20-8:50, BlegH 10, Jones
<b>Winter Qtr</b>	<b>1052</b>	Sec 2	<b>Th</b> —6:20-8:50, BlegH 10, Jones
<b>Spring Qtr</b>	<b>1053</b>	Sec 3	<b>Th</b> —6:20-8:50, BlegH 10, Jones

(See also Classics; and Near and Middle Eastern Studies)

**Hist 1101, 1102, 1103 MEDIEVAL AND RENAISSANCE HISTORY.** 4 degree credits each quarter, §3101, 3102, 3103. \$62 each quarter. (♦\$31) (IS)

◆ **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)

Symbols, abbreviations, off-campus class locations begin on page 401.

<b>Fall Qtr</b>	<b>1101</b>	Sec 1	<b>W—6:20-8:50, BlegH 335, Bachrach</b>
<b>Winter Qtr</b>	<b>1102</b>	Sec 2	<b>W—6:20-8:50, BlegH 335, Bachrach</b>
<b>Spring Qtr</b>	<b>1103</b>	Sec 3	<b>W—6:20-8:50, BlegH 335, Bachrach</b>

**Hist 1301, 1302 AMERICAN HISTORY.** 4 degree credits each quarter. \$62 each quarter. (◆\$31) (IS)

Survey of political, economic, and social history of the United States with emphasis on forces that resulted in the emergence of Modern America. **1301:** Colonial, early national period through the sectional crisis. **1302:** Modern America. (No prereq)

<b>Fall Qtr</b>	<b>1301</b>	★Sec 1	<b>W—6:20-8:50, Richfield HS 143 (Limit 30 students)</b>
	<b>1302</b>	Sec 2	<b>Sa—9 a.m.-11:30, BlegH 240, Berman</b>
<b>Winter Qtr</b>	<b>1301</b>	Sec 3	<b>Th—6:20-8:50, BlegH 215, Berman</b>
	<b>1302</b>	★Sec 4	<b>W—6:20-8:50, Richfield HS 142 (Limit 30 students)</b>
<b>Spring Qtr</b>	<b>1302</b>	Sec 5	<b>Th—6:20-8:50, BlegH 415, Berman</b>

◆ **\*Hist 1310 TOPICS: THE FAMILY IN AMERICAN HISTORY.** 4 degree credits, \$62. (◆\$31)

This course will consider family life and structure within the context of American history. Special attention will be given to racial and ethnic diversity and the adaptation of differing family values to the American environment. (No prereq. Limited to 40 students)

<b>Fall Qtr</b>	Sec 1	<b>T—7-9:30, Minnetonka HS 119, Bolin</b>
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(See also Family Social Science)

**Hist 1310 TOPICS: URBAN HISTORY OF THE TWIN CITIES, 1880 TO THE PRESENT.** 4 degree credits, \$62. (◆\$31)

History of the economic development and population growth of the Twin Cities metropolitan area plus topical consideration of political and social problems of urban growth, 1880 to the present. Local history of suburban sprawl, urban planning, ethnic conflict, and social welfare, with special emphasis on periods of crisis in the 1890's, the late 1910's, the 1930's, and the 1960s. (No prereq)

<b>Fall Qtr</b>	Sec 2	<b>W—6:20-8:50, AndH 330, Benson</b>
<b>Spring Qtr</b>	Sec 3	<b>W—6:20-8:50, Sandburg JHS 210, Golden Valley; Benson</b>

(See other Minnesota courses, page 313)

**Hist 3001, 3002, 3003 INTRODUCTION TO MODERN EUROPEAN HISTORY.** 4 degree credits each quarter, \$1001, 1002, 1003. \$62 each quarter.

See course description for Hist 1001, 1002, 1003. (No prereq. Meet concurrently with 1001, 1002, 1003)

<b>Fall Qtr</b>	<b>3001</b>	Sec 1	<b>W—6:20-8:50, AndH 210, Rudolph</b>
<b>Winter Qtr</b>	<b>3002</b>	Sec 2	<b>W—6:20-8:50, BlegH 245, Rudolph</b>
<b>Spring Qtr</b>	<b>3003</b>	Sec 3	<b>W—6:20-8:50, BlegH 240, Wright</b>

**Hist 3051, 3052, 3053 ANCIENT CIVILIZATION.** 3 degree credits each quarter, \$1051, 1052, 1053. \$46.50 each quarter.

See course description for Hist 1051, 1052, 1053. **NOTE—3052 and 3053 may be applied toward CLA foreign language requirement, Route II for Greek and Latin (see page 68).** (No prereq. Meets concurrently with 1051, 1052, 1053)

<b>Fall Qtr</b>	<b>3051</b>	Sec 1	<b>Th—6:20-8:50, BlegH 10, Jones</b>
<b>Winter Qtr</b>	<b>3052</b>	Sec 2	<b>Th—6:20-8:50, BlegH 10, Jones</b>
<b>Spring Qtr</b>	<b>3053</b>	Sec 3	<b>Th—6:20-8:50, BlegH 10, Jones</b>

**Hist 3101, 3102, 3103 MEDIEVAL AND RENAISSANCE HISTORY.** 4 degree credits each quarter, \$1101, 1102, 1103. \$62 each quarter. (IS)3101, 3102.

See course description for Hist 1101, 1102, 1103. (No prereq. Meet concurrently with 1101, 1102, 1103)

<b>Fall Qtr</b>	<b>3101</b>	Sec 1	<b>W—6:20-8:50, BlegH 335, Bachrach</b>
<b>Winter Qtr</b>	<b>3102</b>	Sec 2	<b>W—6:20-8:50, BlegH 335, Bachrach</b>
<b>Spring Qtr</b>	<b>3103</b>	Sec 3	<b>W—6:20-8:50, BlegH 335, Bachrach</b>

Symbols, abbreviations, off-campus class locations begin on page 401.

**Hist 3200 TOPICS: JEWS IN THE MODERN WORLD.** 4 degree credits each quarter, \$62 each quarter. (◆\$31)

**Fall:** Middle Ages through Emancipation in the 19th century. A social, religious, political and intellectual history of the Jewish people from the time of their immigration to Europe through the optimistic years consequent to their emancipation. **Winter:** Anti-Semitism through the State of Israel. A continuation of Fall quarter with special focus on such topics as anti-Semitism, mass emigration, Yiddish culture, Zionism, assimilation, Holocaust, and the founding of the Jewish State of Israel. (No prereq)

**Fall Qtr** Sec 1 **W**—6:20-8:50, BlegH 215, Meyerson

**Winter Qtr** Sec 2 **W**—6:20-8:50, BlegH 110, Meyerson

**Hist 3224, 3225; 3226 WORLD WAR II.** 4 degree credits each quarter, \$5224, 5225, 5226. \$62 each quarter. (◆\$31)

**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)

**Fall Qtr** **3224** Sec 1 **M**—6:20-8:50, AndH 230, Seelig

★Sec 2 **T**—7-9:30, StP Capitol Complex, Square A, Seelig  
(Limit 50 students)

**Winter Qtr** **3225** Sec 3 **M**—6:20-8:50, AndH 230, Seelig

★Sec 4 **T**—7-9:30, StP Capitol Complex, Square A, Seelig  
(Limit 50 students)

**Spring Qtr** **3226** Sec 5 **M**—6:20-8:50, AndH 230, Seelig

★Sec 6 **T**—7-9:30, StP Capitol Complex, Square A, Seelig  
(Limit 50 students)

**Hist 3273 MODERN SCANDINAVIA.** 4 degree credits, \$62. (◆\$31)

Modern Scandinavia (19th and 20th centuries). (No prereq. May be applied toward the CLA foreign language requirement, Route II, for Finnish, Danish, Swedish and Norwegian [see page 359].)

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

**Hist 3471 20TH-CENTURY JAPAN.** 4 degree credits, \$5471, \$62. (◆\$31)

The modern transformation, 1870's to 1970's. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 359].)

**Spring Qtr** Sec 1 **Th**—6:20-8:50, SocSci 860, Marshall

**Hist 3483 HISTORY OF SOUTH ASIA: MODERN INDIA.** 4 degree credits, \$5483, \$62. (◆\$31)

South Asia under British rule and the rise of independent nation-states. (No prereq)

**Fall Qtr** Sec 1 **Th**—6:20-8:50, AndH 350, Kopf

**Hist 3501, 3502, 3503 ANCIENT ISRAEL: THE BACKGROUND OF THE BIBLE.** 3 degree credits each quarter, \$ANEJ 1501, 1502, 1503, 3501, 3502, 3503. \$46.50 each quarter (◆\$23.25)

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 359]. No knowledge of Hebrew required. Meets concurrently with ANEJ 1501, 1502, 1503, 3501, 3502, 3503)

**Fall Qtr** **3501** Sec 1 **W**—6:20-8:50, FoIH 209

**Winter Qtr** **3502** Sec 2 **W**—6:20-8:50, FoIH 104

**Spring Qtr** **3503** Sec 3 **W**—6:20-8:50, FoIH 209

Symbols, abbreviations, off-campus class locations begin on page 401.

**Hist 3509 MILITARY HISTORY OF THE ANCIENT WORLD.** 4 degree credits, \$62. (◆\$31)

The conduct of war in the Ancient Near East, Greece and Rome. The importance of warfare in the political, economic and social development of ancient societies. (No prereq)

**new**

Fall Qtr Sec 1 T—6:20-8:50, SocSci 628, Kelly

**Hist 3721, 3722 20TH-CENTURY EUROPE.** 4 degree credits each quarter, \$62 each quarter. (◆\$31)

3721: Pre-1914 Europe to 1939. 3722: Europe since 1939. (No prereq)

**new**

Fall Qtr 3221 Sec 1 T—6:20-8:50, AndH 330, Smith

Winter Qtr 3222 Sec 2 T—6:20-8:50, AndH 330, Smith

**Hist 3802 COLONIAL PERIOD OF AMERICAN HISTORY.** 4 degree credits, \$62. (◆\$31)

Provincial America, 1689-1765. (No prereq)

Spring Qtr Sec 1 W—6:20-8:50, AndH 330

**Hist 3804 ERA OF THE AMERICAN REVOLUTION.** 4 degree credits, \$62. (◆\$31)

Causes and consequences of the Revolution. (No prereq)

Winter Qtr Sec 1 M—6:20-8:50, AndH 330, Howe

**Hist 3821, 3822, 3823 THE UNITED STATES IN THE TWENTIETH CENTURY.** 4 degree credits each quarter, \$62 each quarter. (◆\$31)

Major political, economic, intellectual and social trends; the development of a corporate society; American imperialism and the rise to global; reform movements from Populism to the New Left. 3821: 1890 to 1920. 3822: 1920 to 1945. 3823: 1945 to present. (No prereq)

Fall Qtr 3821 Sec 1 Th—6:20-8:50, BlegH 150, Noble

Winter Qtr 3822 Sec 2 Th—6:20-8:50, BlegH 150, Noble

Spring Qtr 3823 Sec 3 Th—6:20-8:50, BlegH 150, Noble

**Hist 3841 AMERICAN BUSINESS HISTORY.** 5 degree credits, \$77.50. (◆\$38.75)

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)

Fall Sem Sec 1 Th—6:20-8:50, BlegH 350, Green

**Hist 3861, 3862 HISTORY OF AMERICAN IMMIGRATION.** 4 degree credits each quarter, \$62 each quarter. (◆\$31)

Transoceanic immigrations; formation of ethnic communities; emergence of a pluralistic society. 3861: To 1880. 3862: Since 1880. (No prereq)

**new**

Winter Qtr 3861 Sec 1 T—6:20-8:50, BlegH 245, Vecoli

Spring Qtr 3862 Sec 2 T—6:20-8:50, BlegH 245, Vecoli

**Hist 3881, 3882 HISTORY OF AMERICAN FOREIGN RELATIONS.** 4 degree credits each quarter, \$62 each quarter. (◆\$31)

3881: Examination of the foreign policy and diplomacy of American independence and territorial and commercial expansion, 1775 and 1900. 3882: Examination of America's commercial expansion, involvement in war, and role as a superpower in the twentieth century. (No prereq)

Fall Qtr 3881 Sec 1 W—6:20-8:50, BlegH 245, Moss

Winter Qtr 3882 Sec 2 W—6:20-8:50, RarigC 610, Moss

**Hist 3961 MAJOR PAPER.** 5 degree credits, \$77.50.

Required of all history majors, usually taken in the senior year. Students prepare a research paper on the topic they choose, working largely with original materials (printed documents, memoirs, literature, etc.). Attend first meeting or contact Office of Undergraduate Studies in History, 668 SocSci (373-5844)

Spring Sem Sec 1 M—6:20-8:50, BlegH 350

Symbols, abbreviations, off-campus class locations begin on page 401.



**Hist 5151, 5152, 5153 MODERN ENGLAND: TUDOR AND STUART PERIODS.** 4 degree credits each quarter. \$68 each quarter. (◆\$34)

**5151:** Henry VIII and the English Reformation. **5152:** The Age of Elizabeth I. **5153:** The English Civil War and the Restoration, 1625 to 1689. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr 5151** Sec 1 T—6:20-8:50, BlegH 240, Lehmborg

**Winter Qtr 5152** Sec 2 T—6:20-8:50, BlegH 240, Lehmborg

**Spring Qtr 5153** Sec 3 T—6:20-8:50, BlegH 240, Lehmborg

**Hist 5264 MODERN RUSSIA: 18TH CENTURY BACKGROUND.** 4 degree credits, \$68. (◆\$34)

Foundation of the Russian Empire, modernization and expansion under Peter the Great and Catherine the Great. The question of Russia's Europeanization. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 359]. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 M—6:20-8:50, BlegH 430, Stavrou

**Hist 5265 MODERN RUSSIA: 19TH CENTURY.** 4 degree credits, \$68. (◆\$34)

Political, social and cultural developments from Alexander I to the 1905 Revolution. Emphasis on the revolutionary movement and the consequences of the emancipation of the serfs, and Russian industrialization. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 359]. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 M—6:20-8:50, BlegH 430, Stavrou

**Hist 5266 MODERN RUSSIA: THE 20TH CENTURY.** 4 degree credits, \$68. (◆\$34) (IS)

Fall of the Russian monarchy, revolutions, and Soviet regime. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 359]. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 M—6:20-8:50, BlegH 430, Stavrou

**Hist 5341, 5342 AMERICAN ECONOMIC HISTORY.** 4 degree credits each quarter. \$68 each quarter. (◆\$34)

**5341:** Colonial period to 1865. **5342:** 1865 to present. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr 5341** Sec 1 M—6:20-8:50, BlegH 440, Green

**Winter Qtr 5342** Sec 2 M—6:20-8:50, BlegH 440, Green

**Hist 5432, 5433 PROBLEMS IN CONTEMPORARY AFRICA.** 4 degree credits each quarter, \$68 each quarter. (◆\$34)

**5432:** Study of historical and social developments in Africa since the 1900s. **5433:** Problems of post-independent nation-building and integration. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr 5432** Sec 1 T—6:20-8:50, BlegH 440, Isaacman

**Winter Qtr 5433** Sec 2 T—6:20-8:50, BlegH 440, Isaacman

**Hist 5471 20TH-CENTURY JAPAN.** 5 degree credits, \$3471, \$85.

The modern transformation, 1870's to 1970's. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 359].)

**Spring Qtr** Sec 1 Th—6:20-8:50, BlegH 225, Marshall

**new**

## history of medicine (HMed)

*John Eyler, Assistant Professor of History of Medicine*

**HMed 5026 MEDICINE SINCE 1800: EMPHASIS ON AMERICA.** 4 degree credits, \$68.  
(♦\$34)

Development of the basic medical sciences (experimental physiology and psychology, pathology, and bacteriology); medical theory and European positivism; colonial background of American medicine; European medicine and American medical education; medical sects and professional life in the 19th century; medical care of women; A.M.A. and health policy; reform of medical education and the growth of medical specialties; biomedical knowledge and population policy (eugenics, social and mental hygiene), establishment of socialized medicine in Europe, health insurance in America. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 **W**—6:20-8:50, DiehIH 555, Eyler

(See also Family Planning Administration)

## history of science and technology (HSci)

*Malcolm Kottler, Assistant Professor*

**HSci 1811 INTRODUCTION TO HISTORY OF SCIENCE: ANCIENT.** 4 degree credits, \$62.  
(♦\$31)

Babylonian and Egyptian science; Greek natural philosophy, mathematics, astronomy, and biology; the Aristotelian world; decline and transmission of Greek science. (No prereq)

**Fall Qtr** Sec 1 **M**—6:20-8:50, BlegH 125, Kottler

## college of home economics

See the following alphabetical departmental listings for course offerings in:

### design

Home Design and Planning, Dsgn 0400C  
Crafts Materials, Dsgn 0437C  
Calligraphy, Dsgn 1426  
Layout for Interior Design, Dsgn 1428  
Drafting: Basic Drafting Techniques, Dsgn 1450  
Interior Design I, Dsgn 1455  
Interior Design II, Dsgn 1456  
Use of Color, Dsgn 1521  
Drawing and Design, Dsgn 1523  
Two-Dimensional Design I, Dsgn 1525  
Surface-Fabric Design, Dsgn 1531  
Structure Fabric Design I, Dsgn 1532  
Metalsmithing: Introduction to Techniques, Dsgn 1533  
History of Traditional Furniture, Dsgn 3412  
20th-Century Interiors and Furnishings, Dsgn 3415  
Perspective and Presentation Sketches, Dsgn 3450  
Interior Design Rendering, Dsgn 3451  
Seminar in Interior Design, Dsgn 3455  
Seminar in Interior Design, Dsgn 3456  
Interior Design Specifications, Dsgn 3457  
Interior Design Business, Dsgn 3459  
Interior Design Clinic, Dsgn 3460-3461  
Interior Design: Housing and the Urban Environment, Dsgn 3463  
Interior Design: Housing, Dynamics and Policy, Dsgn 3467  
Contract Design Seminar, Dsgn 3477-3478  
Metalsmithing: Fabrication, Dsgn 3533  
Metalsmithing: Enameling, Dsgn 3536  
Housing Management, Dsgn 5561  
Homes of the World, Dsgn 5565

## family social science

Dynamics of Dating, Courtship and Marriage, FSoS 1001  
 Dynamics of Marriage and Parenthood, FSoS 1002  
 Parenthood, FSoS 1025  
 Human Sexual Behavior, FSoS 5001  
 Parenting, FSoS 5025  
 Family Relationship, FSoS 5200  
 Problems in Family Financial Management, FSoS 5219  
 Special Topic: Developmental Stage Theory, FSoS 5240

## food science and nutrition

Understanding Cheese, FScN 1030  
 Home Preservation of Foods, FScN 1215  
 Meat Science, FScN 1500  
 Sociocultural Aspects of Nutrition, FScN 1600  
 Family Nutrition, FScN 1603  
 Food Chemistry, FScN 3110  
 Microbiology of Foods, FScN 3123  
 Community Nutrition, FScN 3642  
 Hospitality Financial Management, FScN 3762  
 Independent Study in Food Science and Nutrition, FScN 5111  
 Chemical and Instrumental Analysis of Foods, FScN 5312  
 Food Packaging, FScN 5380  
 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  
 Food Process Microbiology, FScN 8120

## textiles and clothing

Experimental Studies in Clothing Construction, TexC 5603  
 Issues, Trends in Textile Consumer Problems, TexC 5622

For information about credit courses given in suburban or out-state locations please write or call College of Home Economics, University of Minnesota, St. Paul, Minnesota 55108, telephone 373-0935.

## horticultural science (Hort)

(See also Landscape Architecture and Botany)

*D.W. Davis, Professor of Horticultural Science*  
*Mervin Eisel, Instructor in Horticultural Science*  
*Stephen Grier, Teaching Assistant in Horticultural Science*  
*C.G. Hard, Professor of Horticultural Science*  
*Leonard Hertz, Associate Professor of Horticultural Science*  
*Robert Mullin, Associate Professor of Horticultural Science*  
*P.E. Read, Associate Professor of Horticultural Science*  
*Kenneth E. Simons, Instructor in Horticultural Science*  
*O.C. Turnquist, Professor of Horticultural Science*  
*Harold F. Wilkins, Associate Professor of Horticultural Science*

Symbols, abbreviations, off-campus class locations begin on page 401.

**Hort 1001 FUNDAMENTALS OF HORTICULTURE.** 4 degree credits, \$62 plus \$2 course fee. Total \$64.

Fruit, vegetable, and ornamental plants, including factors which influence their culture, value, and importance. Useful to both the home gardener and to the person considering a career in horticulture. (No prereq)

**Fall Qtr** Sec 1 **T**—7-9:30, Research and Education Bldg, Minnesota Landscape Arboretum (west of Rt 41 on Hwy 5) Chaska  
(♦\$30 plus \$2 course fee. Total \$32. Books available at Arboretum Gift Shop)

**Spring Qtr** ★Sec 2 **M**—6-9:20, AlderH 415, StP Campus, Turnquist (Limit 60 students\*)

**Hort 1010 HOME LANDSCAPE GARDENING AND DESIGN.** 3 degree credits, \$46.50 plus \$2 course fee. Total \$48.50. (IS)

Designed for the student who does not plan to major in landscape horticulture. Gives working knowledge of propagation and culture of common house plants and landscape materials: turf, flowers, trees, and shrubs. Principles of home landscape design are discussed. Lectures, lab. (No prereq)

**Fall Qtr** Sec 1 **W**—6:20-8:50, HrG 172, StP Campus, Hard

Sec 2 **Th**—6:20-8:50, HrG 172, StP Campus, Read

**Winter Qtr** Sec 3 **T**—7-9:30, Research and Education Bldg, Minnesota Landscape Arboretum (west of Rt 41 on Hwy 5) Chaska; Eisel  
(♦\$25 plus \$2 course fee. Total \$27). 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, \$62 plus \$2 course fee. Total \$64.

Evaluation and grading of fruit, vegetables and flowers. Emphasis placed on market standards and conformation of horticultural produce in commercial channels and horticultural exhibits. Organization and staging of commercial and non-commercial exhibits. Lectures, laboratory, and reference reading. (No prereq. Limited to 30 students)

**Fall Qtr** Sec 1 **M**—6-9:20, HrG 172, StP Campus, Turnquist

★**Hort 1021 PLANT MATERIALS I.** 4 degree credits, \$62.

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, AlderH 415, StP Campus; Mullin

★**Hort 1022 PLANT MATERIALS II.** 4 degree credits. \$62. (♦\$31)

Taxonomy, ecology, and landscape uses of perennial and annual flowers, tender and hardy bulbs, ground covers, and selected deciduous shrubs. Lectures, laboratory. (No prereq. Limited to 50 students)

**Spring Qtr** Sec 1 **Sa**—9:30 a.m.-1:00, Research and Education Bldg, Minnesota Landscape Arboretum (west of Rt 41 on Hwy 5) Chaska;  
Books available at Arboretum Gift Shop.

Hort 1022 is also offered as a summer Extension class.

★**Hort 1036 PLANT PROPAGATION.** 4 degree credits. \$62 plus \$2 course fee. Total \$64.

Principles and techniques of propagating plants by seeds, cuttings, grafts, buds, layers, and division. Lectures deal with principles while laboratories give student opportunity to practice various propagating techniques. Field trips. (Prereq 1001 or Biol 1103. Limited to 50 students)

**Winter Qtr** Sec 1 **Th**—6-9:20, HrG 172, StP Campus, Read

Symbols, abbreviations, off-campus class locations begin on page 401.

★Hort 3026 **RESIDENTIAL LANDSCAPE DESIGN.** 4 degree credits, \$62 plus \$2 course fee. Total \$64. (IS)

Principles of landscape design with special reference to their practical application in planning of residential landscapes. Relationships of landscape design, architectural design, and interior design. Landscape plans, landscape drafting techniques and methods of presentation. Lectures, drawings, and practical problems. (Prereq 1021, LA 1024, or professional design experience. Limited to 25 students)

Winter Qtr Sec 1 W—6-9:20, AlderH 415, StP Campus, Hard

◆ Hort 3031 **FRUIT SCIENCE.** 3 degree credits, \$46.50. (◆\$23.25)

Principles of fruit production. Fruits of the world with emphasis on temperate climate crops. Topics include site selection, cultural and management practices, physiological and environmental control of plant development, dwarfing, growth regulating compounds, insecticides, herbicides and wine making. Lectures and reference readings. (Prereq Hort 1001 or 1010)

Winter Qtr Sec 1 M—6:20-8:50, AlderH 415, StP Campus, Stushnoff, Hertz

◆ Hort 3032 **VEGETABLE SCIENCE.** 3 degree credits, \$46.50 plus \$2 course fee. Total \$48.50. (◆\$23.25 plus \$2 course fee. Total \$25.25)

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)

Spring Qtr Sec 1 W—6:20-8:50, AlderH 172, StP Campus, Grier

★Hort 3076 **ARBORICULTURE.** 3 degree credits, \$46.50 plus \$2 course fee. Total \$48.50.

Survey of environmental and design functions of shade trees. Application of specific cultural principles and techniques pertaining to the installation, maintenance, and preservation of shade and ornamental trees. Equipment selection and adaptability. Fundamental concepts used in the organization and administration of community shade tree programs. Lectures, demonstrations, and field trips. (Prereq 1021, 3074, or For 1100 or §. Limited to 30 students)

Winter Qtr Sec 1 TTh—3:30-5, AlderH 415, StP Campus, Simons

★Hort 3077 **FLORAL DESIGN.** 3 degree credits, \$46.50 plus \$20 course fee. Total \$66.50.

Fundamental principles in floral arrangement. Analysis of basic principles used in floral design. The decorative use of flowers, foliage and accessories. (No prereq. Limited to 25 students)

Fall Qtr Sec 1 M—6-9, AlderH 423, StP Campus, Wilkins

★Hort 5020 **HORTICULTURAL TECHNIQUES FOR EDUCATION MAJORS.** 3 degree credits, \$51 plus \$2 course fee. Total \$53.

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 30 students. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 W—6:20-8:50, HrG 172, StP Campus, Read

## hospital administration

For information on non-credit conferences or workshops in hospital administration, please contact Vernon Weckwerth, 1260 Mayo; telephone 373-8052, or Victoria Wahlberg, 376-1544.

# humanities (Hum)

(See also General College and American Studies)

*Paul D'Andrea, Chairman and Associate Professor of Humanities*

*Jackson Hershbell, Associate Professor of Classics*

*George Kliger, Assistant Professor of Humanities*

*Richard Leppert, Assistant Professor of Humanities*

*Gary Thomas, Assistant Professor of Humanities*

## **A MAJOR IN HUMANITIES CAN BE COMPLETED IN THE EVENING.**

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

## **B.A. Major Sequence**

### **Major Requirements**

25 humanities cr, at least 5 in European Heritage courses and 15 in European Heritage or Modern World (no more than 10 at the 1xxx level), and 5 in any 3xxx- or 5xxx-level humanities course except the proseminars. 9 cr in humanities proseminars.

45 3xxx-5xxx-level cr, distributed thus: 18 to 21 cr from anthropology, geography, history, linguistics, philosophy, political science, psychology, sociology; 24 to 27 cr in literature (any language, ancient or modern), history of art, history of music, history of theatre, studio arts, studio music, theatre or oral interpretation.

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

**Hum 1001 HUMANITIES IN THE MODERN WORLD I.** 5 degree credits, \$3001, Rhet 1301. \$77.50. (◆\$38.75)

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 T—6:20-9:40, Sandburg JHS 209, Golden Valley; Hershbell

**Spring Qtr** Sec 2 M—6:20-9:40, ForH 349, Thomas

See TV course, Hum 1001, *From Enlightenment to Revolution: Our 18th Century Heritage*, page 312.

**Hum 1002 HUMANITIES IN THE MODERN WORLD II.** 5 degree credits, \$3002, Rhet 1302. \$77.50. (◆\$38.75) (IS)

The Industrial Revolution, liberalism, socialism, the psychology of individualism. Period covered is from 1776 to 1890. Authors: Carlyle, Mill, Marx, Smith, Malthus, Ibsen, Dostoevski. (No prereq)

**Spring Qtr** Sec 1 W—6:20-9:40, Sandburg JHS 211, Golden Valley

**Hum 1003 HUMANITIES IN THE MODERN WORLD III.** 5 degree credits, \$3003, Rhet 1303. \$77.50. (◆\$38.75)

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 T—6:20-9:40, Sandburg JHS 205, Golden Valley; Kliger

**Hum 1004 HUMANITIES IN THE MODERN WORLD IV.** 5 degree credits, \$3004, Rhet 3381. \$77.50. (◆\$38.75)

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)

**Winter Qtr** Sec 1 M—6:20-9:40, ForH 285, Kliger

Symbols, abbreviations, off-campus class locations begin on page 401.

**Hum 1011 EUROPEAN HERITAGE.** 5 degree credits each quarter, \$3011, 3012, 3013, Rhet 3321, 3322, 3323. \$77.50 each quarter. (♦\$38.75)

Masterpieces of European civilization from Homer to Cervantes. Literature, philosophy, theology, arts of Greece, Rome, Middle Ages, and Renaissance. Ideals and forces of continuing importance to modern world. Greek heritage. May be applied toward the CLA foreign language requirement Route II for Greek [see page 359]. (No prereq)

**Winter Qtr** Sec 1 **W**—6:20-9:40, ForH 130, Hershbel

**Hum 1101 THE LIFE OF THE MIND.** 5 degree credits, \$77.50. (♦\$38.75)

Exploration of some of the available ways of "reading" poetry, sculpture, history, philosophy, painting, rhetoric, music and film by studying works by a variety of creative persons such as Stevens, Einstein, Henry Moore, Bach, Lincoln, Plato, Genet, Euclid and Fellini. (No prereq)

**Spring Qtr** Sec 1 **T**—7-9:30, Nicollet JHS, Burnsville

**Hum 3012 ROMAN HERITAGE.** 5 degree credits, \$77.50. (♦\$38.75)

Masterpieces of European civilization from Homer to Cervantes. Literature, philosophy, theology, arts of Greece, Rome, Middle Ages, and Renaissance. Ideals and forces of continuing importance to modern world. (No prereq)

**Winter Qtr** Sec 1 **M**—6:20-9:40, ForH 70, Leppert

**Hum 3071 SELF REALIZATION IN 20TH-CENTURY LITERATURE.** 5 degree credits, \$77.50. (♦\$38.75)

The quest for meaning and the process of individuation critically explored in works of 20th-century literature. (No prereq)

**Spring Qtr** Sec 1 **T**—6:20-9:40, ForH 115, Klinger

**Hum 3112 MEDIEVAL HERITAGE.** 5 degree credits, \$77.50. (♦\$38.75)

Masterpieces of European civilization from Homer to Cervantes. Literature, philosophy, theology, arts of Greece, Rome, Middle Ages, and Renaissance. Ideals and forces of continuing importance to modern world. (No prereq)

**Spring Qtr** Sec 1 **M**—6:20-9:40, ForH 115, Leppert

**Hum 3910 DISASTER AND HUMAN SOCIETY.** 4 degree credits, \$62. (♦\$31)

The effect of natural disasters on human culture, especially literature, from *Genesis* to Camus' *The Plague*. Mythical as well as historical disasters will be considered. Plato's Atlantis, the London plague, the Lisbon earthquake. Consideration will also be given to how representatives of different cultures have responded to plague, earthquake, fire, famine, and flood. Readings in *Genesis*, *Gilgamesh*, Homer, Plato, Defoe, Voltaire, and Camus. (No prereq)

**Fall Qtr** Sec 1 **T**—6:20-8:50, ForH 170, Hershbell

**Hum 5030 HUMANITIES PROSEMINAR.** 3 degree credits each quarter. \$51 each quarter.

Integrated review of humanities materials: arts, sciences and civilization. May be repeated for credit. (Prereq sr. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 **W**—6:20-8:50, ForH 349

**Winter Qtr** Sec 2 **Th**—6:30-8:10, ForH 349

## human relations

(See PsyF 5305)

Symbols, abbreviations, off-campus class locations begin on page 401.



## indic

(See South Asian Studies)

## industrial education

(See Vocational Education)

## industrial engineering/operations research (IEOR)

Your attention is called to the Undergraduate Development Certificate in Industrial Engineering 90 credits, page 398; Professional Development Recognition Program in Engineering and Science, page 127; and I of T 0001, Fundamentals of Engineering Review, page 205.

*Sant R. Arora, Associate Professor of Mechanical Engineering*

*Robert B. Gunderson, Manager, Staff Manufacturing, 3M Co.*

*James L. Reynolds, Instructor in Mechanical Engineering*

*Robert Thompson, Supervisor, Process Industrial Engineering, 3M Co.*

*John S. White, Professor of Mechanical Engineering*

**IEOR 0100C INDUSTRIAL ENGINEERING AND MANAGEMENT.** 5 certificate credits, \$77.50.

A study of the problems and techniques of developing a highly efficient management team for a modern manufacturing concern. Includes discussions on business organization and financing, research and product development, standardization, plant layout and materials handling, production and inventory control, quality control, cost control, labor relations. (No prereq)

**Fall Sem** Sec 1 **M**—6-9, MechE 302

**IEOR 0210C MOTION AND TIME STUDY.** 5 certificate credits, \$77.50 plus \$1 special fee. **Total \$78.50. (IS)**

Principles and techniques for effective work methods and analysis. Process charts, flow diagrams, paper work systems, work distribution tables, micromotion study. The role of the worker in the work environment. Fundamentals of work measurement; time study, work sampling, predetermined time systems, and standard data. Discussion of performance rating, number of cycles to study, allowances, and other factors necessary to develop an effective standard. (No prereq)

**Spring Sem** Sec 1 **M**—6-9, MechE 302

**\*IEOR 0220C PRODUCTION AND INVENTORY CONTROL.** 5 certificate credits, \$77.50.

**new**

Principles and techniques of the formal production and inventory control system. Objectives, demand forecasting, inventory management, materials control, master

Symbols, abbreviations, off-campus class locations begin on page 401.



production schedule, material requirements planning, capacity planning and control, shop floor control, production planning and control management game. (Prereq IEOR 0100C or equiv or \$. Limited to 25 students)

Spring Sem Sec 1 W—6-9, MechE 180

**IEOR 0330C MANUFACTURING COST ANALYSIS.** 3 certificate credits, \$46.50.

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, MechE 221

**IEOR 0408C CORPORATE STANDARD DATA (C.S.D.) I.** 5 certificate credits, \$77.50.

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 5000 INTRODUCTION TO INDUSTRIAL ENGINEERING ANALYSIS.** 4 degree credits, \$68.

Scientific management, mathematical models, methods engineering, work measurement, worker satisfaction and participation, wage payment plans, breakeven analysis, incremental costs, the time value of money and the present value concept; cost quality and inventory control; production scheduling, plant locations, and layout; linear programming, PERT, and the systems approach to management problems. (Prereq Math 1231, ME 3900 or equiv. or \$. Qualified students may register for graduate credit at the University of Minnesota)

Spring Sem Sec 1 W—6-8:15, MechE 302

**IEOR 5030 QUALITY CONTROL AND RELIABILITY.** 4 degree credits, \$68.

History of quality control, quality policies and objectives, economics of quality, design for system effectiveness, reliability and maintainability, statistical aids to reliability, quality specifications, inspection, acceptance sampling, vendor relations, process control, motivation for quality, quality assurance, and quality control engineering. (Prereq Math 1231, ME 3900; IEOR 5000 recommended. Qualified students may register for graduate credit at the University of Minnesota)

Fall Sem Sec 1 W—6-8:15, MechE 302

**new**

## industrial relations (IR)

Your attention is called to the Industrial Relations Certificate program, page 389; and to GC 3602, Applied Supervision.

(See also GC 3464, Communication in Organizations; GC 3560, Personnel Administration; Psy 5701, Personnel and Industrial Psychology; Rhet 5170, Managerial Communications; Spch 5441, Communication in Human Organizations)

*Ross E. Azevedo, Assistant Professor of Industrial Relations*

*George R. Bloom, President, Industrial Relations Associates, Inc.*

*Mario F. Bognanno, Professor of Industrial Relations*

*Charles D. Cambridge, Teaching Associate in Industrial Relations*

*Shimon L. Dolan, Teaching Associate in Industrial Relations*

*David L. Estenson, Teaching Associate in Industrial Relations*

*Robert L. Fjerstad, Director, Employee Relations, Northern States Power Co.*

*John J. Flagler, Professor of Industrial Relations*

*Itzhak Harpaz, Teaching Associate in Industrial Relations*

Symbols, abbreviations, off-campus class locations begin on page 401.

Herbert G. Heneman, Jr., Professor of Industrial Relations  
 Viola Kanatz, Bureau of Mediation Service  
 Lawrence Kollath, Teaching Associate in Industrial Relations  
 Leslie J. Krause, Vice President, Labor Relations, Industrial Relations Associates, Inc.  
 George O'Connell, Assistant Professor in Industrial Relations  
 Joseph S. Pettit, Teaching Associate in Industrial Relations  
 Patrick R. Pinto, Associate Professor of Industrial Relations  
 George Seltzer, Professor of Industrial Relations  
 Cyrus F. Smythe, Associate Professor of Industrial Relations  
 Herman Theeke, Teaching Associate in Industrial Relations  
 Hoyt N. Wheeler, Associate Professor of Industrial Relations  
 James T. Wrich, Executive Director, State of Minnesota, Drug and Alcohol Authority

**IR 0001C SUPERVISION I: ELEMENTS OF SUPERVISION.** 3 certificate credits, \$46.50 plus \$2 special fee. Total \$48.50. (1S)

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)

<b>Fall Qtr</b>	Sec 1	<b>M</b> —6:20-8:50, SocSci 307
	★Sec 2	<b>T</b> —7-9:30, Brooklyn Center HS (Limit 50 students)
<b>Fall Sem</b>	Sec 3	<b>W</b> —6:20-8, BlegH 120
<b>Winter Qtr</b>	Sec 4	<b>T</b> —6:20-8, BlegH 120
	★Sec 5	<b>W</b> —7-9:30, Kellogg HS 237, Little Canada (Limit 35 students)
<b>Spring Sem</b>	Sec 6	<b>W</b> —6:20-8, BlegH 115
<b>Spring Qtr</b>	Sec 7	<b>T</b> —6:20-8:50, BlegH 120
	★Sec 8	<b>Th</b> —7-9:30, StP Capitol Complex, Civil Service Center (Limit 50 students)

**IR 0002C SUPERVISION II: ADVANCED TECHNIQUES OF SUPERVISION.** 3 certificate credits, \$46.50 plus \$2 course fee. Total \$48.50.

Emphasizes specialized supervisory techniques based upon principles outlined in Supervision I. Includes discussion of research in supervisory methods and practices and their relative success in application in the office and plant. Methods of supervisory training, morale measurement, job analysis and job evaluation, safety programs, wage and salary administration, principles of organization and communications are among the topics discussed. Extensive use is made of discussion method and case studies. (Prereq 0001C or §)

<b>Fall Sem</b>	Sec 1	<b>T</b> —6:20-8, BlegH 135
<b>Spring Qtr</b>	Sec 2	<b>Th</b> —6:20-8:50, BlegH 120

**IR 0007C THE MINNESOTA OCCUPATIONAL SAFETY AND HEALTH ACT.** 3 certificate credits, \$46.50.

This course is designed to increase understanding of an important employee relations law: The Minnesota Occupational Safety and Health Act of 1973 (MOSHA). For representatives of management, unions, professional associations and government agencies who have interest or responsibility in this area. Topics include the content of the Act and recent legislative developments; identification of the most common safety hazards; detection of hidden health hazards; the development of an Occupational Safety and Health program; joint labor-management safety committees; job dissatisfaction and mental health; chemical dependency as a safety and health hazard; complaints and enforcement; administration and record keeping; and educating and motivating others in the area of occupational safety and health. (No prereq)

<b>Fall Qtr</b>	Sec 1	<b>T</b> —6:20-8:50, AndH 230
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Symbols, abbreviations, off-campus class locations begin on page 401.

**\*IR 3000 GOVERNMENTAL MANPOWER POLICIES AND PROGRAMS.** 4 degree credits, \$62.

The Comprehensive Employment and Training Act (1974) provides the frame of reference. Attention will be given to planning mechanisms, service delivery systems, and program evaluation. Also, consideration will be directed to relationships of federal, state, and local governments and roles of public and private sector organizations. (No prereq. Meets concurrently with 8000 sec 1. Limited to 30 students)

**Fall Qtr** Sec 1 **W**—7-9:30, BlegH 340, Seltzer

**\*IR 3000 COLLECTIVE BARGAINING: THE PUBLIC SECTOR.** 4 degree credits, \$62.

Examines the development and diffusion of collective bargaining regarding governmental employment. The primary focus is on state/local units. Items to be considered include, for example: patterns of employer/union relationships, key issue in negotiations and public policy, the impact of governmental operations (e.g., civil service systems/fiscal aspects/etc.). (No prereq. Meets concurrently with 8000 sec 2 and 3. Limited to 30 students.)

**Fall Qtr** Sec 2 **T**—6:20-8:50, BlegH 404

**Spring Qtr** Sec 3 **W**—7-9:30, BlegH 404, Seltzer

**\*IR 3000 LABOR ARBITRATION.** 4 degree credits, \$62.

Presents a comprehensive view of arbitration as a dispute settlement technique as used in the field of labor-management relations. Following a general introduction into background of arbitration, laws governing this field for inter and intra state commerce industries, and for the mushrooming public sector, will be studied. Special emphasis will be given to techniques used in analyzing grievances processed through the grievance procedure. The course continues to the preparation of material used in the hearing and to the hearing itself. (No prereq. Meets concurrently with 8000 sec 4. Limited to 30 students)

**Spring Qtr** Sec 4 **Th**—6:20-8:50, BlegH 404, Wheeler

**\*IR 3000 POLICY AND PRACTICE IN LABOR LAW.** 4 degree credits, \$62.

This course of study will include an analysis and discussion of employees' rights to organize and restraints on certain union activity. It will deal in depth with the responsibility and role of the National Labor Relations Board; its organization, how representation (union elections) matters are processed, discussion of unfair labor practice charges and injunctions. It will also examine the role of state labor relations agencies and their function in protecting employee rights. The course will also examine the arbitrator's role in these matters and will review the government agencies role in collective bargaining; i.e., FMCS, BMS, WERC. (No prereq. Meets concurrently with 8000 sec 5 and 6. Limited to 30 students)

**Fall Qtr** Sec 5 **M**—6:20-8:50, BlegH 330, Bloom, Krause

**Spring Qtr** Sec 6 **M**—6:20-8:50, BlegH 404, Kanatz

**\*IR 3000 INDUSTRIAL CONTROL SYSTEMS FOR CHEMICALLY DEPENDENT EMPLOYEES.** 4 degree credits, \$62.

Designed to provide information and data on the impact of chemically dependent employees and other troubled employees and to develop skills necessary to design, implement and maintain systems to control human and productivity loss. Available to representatives of management, labor and graduate students in industrial relations. (No prereq. Meets concurrently with 8000 sec 7 and 8. Limited to 36 students)

**Fall Qtr** Sec 7 **M**—6:20-8:50, BlegH 340, Wrich

**Spring Qtr** Sec 8 **M**—6:20-8:50, BlegH 110, Wrich

(See also Public Health)

**IR 3000 ORGANIZED LABOR AND THE POLITICAL PROCESS: 1976.** 4 degree credits, \$62.

Within an Industrial Relations system framework, this course explores organized labor's involvement in the political process. Political process refers both to internal union politics and to external politics: national, state and local. Topics include an IR system model; the environment, structure and functions of the AFL-CIO; union democracy and oligarchy; conditions favoring union involvement in external

politics; the incentives, finances, techniques and results of union political action; labor-party alliances and their historic roots; labor's legislative lobby; and labor's involvement in the 1976 campaign. (No prereq)

**Fall Qtr** Sec 9 **Th—6:20-8:50, BlegH 135, Duffy**

(See also Political Science)

**★IR 3000 JOB: ANALYSIS, DESCRIPTION AND PAY.** 4 degree credits, \$62.

This class will give the student working in the area or interested in the area of personnel an opportunity to learn and apply the techniques of job analysis, job description writing and job evaluation. The student will also be given an opportunity to learn the principles of compensation theory and various types and methods of compensation. (No prereq. Limited to 35 students)

**Spring Qtr** Sec 10 **Th—6:20-8:50, BlegH 245, Fjerstad**

**★IR 3000 SELECTION PROCEDURES, TECHNIQUES AND REGULATIONS.** 4 degree credits, \$62.

Course designed for personnel practitioner or one preparing to enter the field. Subject deals with employment regulations and rules, interviewing, testing, and other selection techniques. (No prereq. Limited to 35 students)

**Fall Qtr** Sec 11 **Th—6:20-8:50, BlegH 260, Fjerstad**

**IR 3002 INDUSTRIAL RELATIONS SYSTEMS: LABOR MARKETS AND THE MANAGEMENT OF HUMAN RESOURCES.** 4 degree credits, \$8002. \$62. (IS)

The study of labor markets, manpower management, Federal-State employment policy, and the resolution of industrial conflict. Process followed in valuing, employing, developing, motivating, and maintaining human resources in an industrial society. (Prereq Econ 1001, Econ 1002, Psy 1001)

**Fall Qtr** Sec 1 **T—6:20-8:50, BlegH 255**

★Sec 2 **W—6:30-9, Kellogg HS 237, Little Canada (Limit 35 students)**

Sec 3 **Sa—9-11, BlegH 120**

**Fall Sem** Sec 4 **Th—6:20-8, BlegH 120**

**Winter Qtr** ★Sec 5 **M—6:30-9, Kellogg HS 235, Little Canada (Limit 35 students)**

Sec 6 **T—7-9:30, BlegH 220**

**Spring Sem** Sec 7 **M—6:20-8:00, BlegH 220**

**Spring Qtr** ★Sec 8 **W—6:20-8:50, Sandburg JHS 212, Golden Valley (Limit 35 students)**

★Sec 9 **W—5:30-8, WCCO Radio Bldg 512, Mpls (Limit 50 students)**

Sec 10 **Th—6:20-8:50, BlegH 335**

**IR 3007 COLLECTIVE BARGAINING NEGOTIATIONS AND MODERN LABOR RELATIONS.** 4 degree credits, \$62.

Analysis of collective bargaining negotiations between employers and/or employer associations and unions. Relevant policies of employers, unions, and the public; background of the labor movement; current practices in labor relations; and significant trends. (No prereq)

**Fall Qtr** Sec 1 **M—6:20-8:50, BlegH 425**

Sec 2 **T—7-9:30, BlegH 210**

**Fall Sem** Sec 3 **W—6:20-8, AndH 350**

**Winter Qtr** ★Sec 4 **M—6-8:30, Richfield HS 342 (Limit 30 students\*)**

**Spring Sem** Sec 5 **W—6:20-8, BlegH 135**

**Spring Qtr** Sec 6 **T—6:30-9, BlegH 260**

**IR 3010 HUMAN RELATIONS AND APPLIED ORGANIZATION THEORY.** 4 degree credits, \$62.

The problems of human relations arising in modern organizations and approaches to their solution. Philosophies and theories of human relations and their translation into policy. Discussions, cases, role-playing, and skill building sessions. **Note:** Not intended for use in meeting State Department of Education Human Relations Certification requirement. See PsyF 5305, page 259. (No prereq)

Symbols, abbreviations, off-campus class locations begin on page 401.

<b>Fall Qtr</b>	Sec 1	T—6:20-8:50, BlegH 120
	Sec 2	W—6:30-9, BlegH 404
	★Sec 3	Th—6-8:30, Richfield HS 142 (Limit 30 students)
<b>Winter Qtr</b>	Sec 4	W—6-8:30, BlegH 340
	★Sec 5	Th—6-8:30, Sandburg JHS 209, Golden Valley (Limit 35 students)
<b>Spring Sem</b>	Sec 6	T—6:20-8, BlegH 110
<b>Spring Qtr</b>	Sec 7	M—6:30-9, BlegH 245
	★Sec 8	W—7-9:30, Southwest HS 9, Mpls (Limit 60 students)

**★IR 3000 GOVERNMENTAL MANPOWER POLICIES AND PROGRAMS.** 4 degree credits, \$92.

See description for 3000. (No prereq. Meets concurrently with 3000 sec 1. Limited to 30 students. Qualified students may register for graduate credit at the University of Minnesota).

**Fall Qtr** Sec 1 W—7-9:30, BlegH 340, Seltzer

**★IR 3000 COLLECTIVE BARGAINING: THE PUBLIC SECTOR.** 4 degree credits, \$92.

See description for 3000. (No prereq. Meets concurrently with 3000 sec 2 and 3. Limited to 30 students. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 2 T—6:20-8:50, BlegH 404, Munger

**Spring Qtr** Sec 3 W—7-9:30, BlegH 404, Seltzer

**★IR 3000 LABOR ARBITRATION.** 4 degree credits, \$92.

See description for 3000. (No prereq. Meets concurrently with 3000 sec 4. Limited to 30 students. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 4 Th—6:20-8:50, BlegH 404, Wheeler

**★IR 3000 GRADUATE TOPICS—POLICY AND PRACTICE IN LABOR LAW.** 4 degree credits, \$92.

See description for 3000. (No prereq. Meets concurrently with 3000 sec 5 and 6. Limited to 35 students. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 5 M—6:20-8:50, BlegH 330, Bloom, Krause

**Spring Qtr** Sec 6 M—6:20-8:50, BlegH 404, Kanatz

**★IR 3000 INDUSTRIAL CONTROL SYSTEMS FOR CHEMICALLY DEPENDENT EMPLOYEES.** 4 degree credits, \$92.

See description for 3000. (No prereq. Meets concurrently with 3000 sec 7 and 8. Limited to 36 students. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 7 M—6:20-8:50, BlegH 340, Wrich

**Spring Qtr** Sec 8 M—6:20-8:50, BlegH 110, Wrich

**IR 8002 INDUSTRIAL RELATIONS SYSTEMS: LABOR MARKETS AND THE MANAGEMENT OF HUMAN RESOURCES.** 5 degree credits, \$3002. \$115.

See course description for IR 3002. (Prereq Econ 1001, Econ 1002, Psy 1001. Semester courses. Qualified students may register for graduate credit at the University of Minnesota)

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

**Spring Qtr** Sec 2 Th—6:20-8:50, BlegH 360

## informal courses (IC)

College courses don't have to be the rigidly organized scramble for grades and credit that many students have come to expect. They can be refreshingly informal, noncompetitive, and flexible. And that's exactly what the Informal Courses are.

Curriculum requirements are nonexistent: there are no grades, examinations, transcripts, or credits. Students can learn in a personalized atmosphere, in many cases sharing experiences and knowledge with other students and instructors. And there are no entrance requirements—a high school diploma isn't necessary, but a college degree or two won't hold you back.

Informal courses are, in a sense, like having your cake and eating it too. They are interesting, provocative, and practical. And all the student must bring is an eagerness to learn and a willingness to participate.

## tuition

See the course descriptions below for tuition charges for each course.

Senior citizens 62 and over may register for any Informal Course at no cost. Young persons 12-16 may register for \$3 if they are genuinely interested, unusually mature and are accompanied by an adult registered in the same class.

Senior citizen and youth reduced-tuition fees for *limited-enrollment* classes are available only on a space-available basis after full-tuition students have registered and paid fees. Students may enroll in *nonlimited-enrollment* classes during regular registration dates.

## registration

Unless otherwise noted, registration procedures, dates and locations are the same as for credit class registrations. See the "When and How to Register" section.

Late registrations must be accompanied by a late fee of \$5. No registrations will be accepted after the end of the second week of classes. See page 25.

## books

In some cases, students will be expected to make a modest amount of outside preparation for class. When the purchase of books is advised, those books will be available at Nicholson Bookstore on the East Bank campus of the University.

## other options

If you don't see here exactly what you want, be sure to browse through the rest of this Bulletin to find hundreds of courses of interest which you may audit for no credit and have recorded on a University transcript. Courses preceded by a ♦ in the margin may be taken for no credit, no record at one-half tuition; or for the \$3 youth plan described above. See page 49 for information on reduced-tuition plans.

**IC 0001 INDIVIDUAL AND FAMILY BUDGET PLANNING.** No credit, \$18 (second member of household \$8)

Learn to develop and manage your personal or family budget. You will acquire—on a basic level—the specific skills and abilities to use credit wisely, discriminate between your needs and wants in spending, set financial goals and develop contingency savings funds. Emphasis is on experiential learning. The budgeting experiences in which you participate in and out of the classroom are designed to become part of your lifestyle immediately. **Confidentiality will be maintained throughout the course.** Materials will be provided at the first class meeting; no other textbook purchase is necessary. Class sessions vary in length from 1 to 2½ hours. The first session will be one hour in length.

**Spec Term Fall** ★Sec 1 T—7-9:30, Oct. 5, 12, 19, 26; Dec. 7;  
St. Stephens Church, WStP; Olson (Limit 60 students)

Sec 2 W—6:20-8:50, Oct. 6, 13, 20, 27; Dec. 1;  
FolH 303, Malmberg

**Spec Term Winter** Sec 3 Th—6:20-8:50, Jan. 6, 13, 20, 27; Mar. 3; NH 213, Olson

**Spec Term Spring** ★Sec 4 W—7-9:30, Apr. 6, 13, 20, 27; June 8;  
Brooklyn Center HS 12, Malmberg (Limit 50 students)

*(John Malmberg is the associate director of the Department of Extension Classes, Continuing Education and Extension. Carol Olson is the director of the Department of Community Programs, Continuing Education and Extension.)*

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The following three courses are intended to provide, on an elementary level, a reasoned examination of various aspects and issues of parapsychology. There are no prerequisites; you may register for any one or for all three. (Instructor Eleanor McGill has taught psychical phenomena courses in the University School of Cross-Disciplinary Studies and is a past president of the Minn. Society for Parapsychological Research.)

**IC 0002 PSYCHICAL PHENOMENA.** No credit, \$29.

This is a general introduction to the field of study called parapsychology, and in particular to those psychical phenomena which may be studied in laboratory settings. The class will look briefly at clairvoyance, telepathy, precognition and psychokinesis. Lectures will include a balance of descriptions of the phenomena, laboratory experiments which have duplicated them, and—when possible—theories and alternative explanations.

**Fall Spec Term** Sec 1 W—7-9, Sept. 29-Nov. 17 (8 meetings), Ph 131

**IC 0003 THE MIND APART: SURVIVAL OF DEATH, APPARITIONS AND HAUNTINGS, OUT-OF-BODY EXPERIENCES.** No credit, \$15

The above phenomena cannot be proven scientifically in controlled laboratory settings, but there certainly are many accounts of hair-raising occurrences. Lectures will briefly describe the phenomena, possible explanations, and a philosopher's approach to the problematic relationship of mind and body.

**Winter Spec Term** Sec 1 W—7-9, Jan. 5-26 (4 meetings), FolH 202

**IC 0004 ALTERED STATES OF CONSCIOUSNESS.** No credit, \$22.

Consider the expanded states of being of which many believe human consciousness is capable. Class members will look at a variety of altered states including theories of transcendental meditation, yoga, and biofeedback. Representatives of at least one of these approaches will visit the class to share knowledge and experiences and answer questions.

**Spring Spec Term** Sec 1 W—7-9:00, Mar. 30—May 4 (6 meetings), ForH 55

**IC 0005 YOUR BRIGHT CHILD IN SCHOOL.** No credit, \$18

Gifted children are frequently "lost" in the day-to-day processes of schools. The purpose of this course is to acquaint teachers, counselors and the parents of very bright children or adolescents with some theories and methods of facilitating education for the gifted. Introductory sessions will examine definitions of giftedness, what happens to very bright children in school, and the meanings and uses of test score information. Later sessions will be devoted to ways to enhance the education of the gifted, at elementary, high school and higher levels, with a focus on organizational changes and specific cases and examples.

**Fall Spec Term** Sec 1 **M**—7-8:40, Sept. 27-Nov. 1 (6 meetings),  
Bu 123, Keating

**Spring Spec Term** ★ Sec 2 **M**—7-8:40, Mar. 28—May 2 (6 meetings),  
Minnetonka HS 119, Keating (Limit 40 students)

*(Daniel Keating, Assistant Professor of Child Psychology in the University's Institute of Child Development, is the editor of Intellectual Talent: Research and Development, The Johns Hopkins University Press, 1975.)*

**IC 0006 OVERVIEW OF MODERN GEOLOGY.** No credit, \$18 plus \$7 special fee. Total \$25. Six special lectures will explain traditional and recent geological theories in such subjects as the origin of life, the extinction of dinosaurs, continental drift and plate tectonics, oceanography and the building of mountains. An all-day Saturday field trip to explore Minnesota's prehistory will be arranged. Further details available in class.

**Fall Spec Term** Sec 1 **Th**—7-8:40, Sept. 30-Nov. 4 (6 meetings plus a  
Saturday field trip), PillsH 110, Chase, Sloan, Stout

*(Professors Clement G. Chase, Robert E. Sloan and James H. Stout are faculty members in the Department of Geology.)*

**IC 0007 GREEK AND ROMAN MYTHOLOGY: A WORLD OF LOVE AND CHANGE.** No credit, \$22.

**new**

What is amber? a narcissus? an echo? You may be surprised to discover that an ancient Greek or Roman would have answered these questions differently from you. A Greek father and son team flew before the Wright brothers. A couple named Deucalion and Pyrrha first survived the Flood. This course will introduce you to some of the characters of Greek and Roman mythology, both human and divine, and to a world in which the most powerful force for change is love. Recommended reading: *The Metamorphoses of Ovid.*

**Spring Spec Term** Sec 1 **T**—7-9, Mar. 29-May 3 (6 meetings), FoIH 304, Rochefort

*(George Rochefort is an Assistant Professor of Classics.)*

**IC 0008 WOMAN'S ROLE, WOMEN'S LIVES I & II.** No credit, \$22 each term.

Heroes inspire us and help us set ideals for our own lives. Class members will look at the lives of women who have excelled in a variety of areas and styles. What strategies for survival have they employed to face the conflicting needs and expectations arising from their roles as women? Note: Students may register for more than one section.

**Sec 1 Public Missions** American historical figures who stepped outside culturally defined roles to reform major institutions. Tentative reading list includes autobiographies of suffragist Elizabeth Cady Stanton, social reformer Jane Addams, abolitionist Sojourner Truth, anarchist Emma Goldman, and a concerned citizen, Eleanor Roosevelt.

**Sec 2 Private Visions** Twentieth century women whose achievements lie within personal, creative or intellectual realms. Tentative reading list includes the autobiographies or works of novelist Dorothy Sayers, anthropologist Margaret Mead, poet and novelist Anne Morrow Lindbergh, and Jungian psychologist Florida Scott-Maxwell. A special viewing of "Antonia," a moving documentary about composer-conductor Antonia Brico, will be shown.

**Fall Special Term** Sec 1 **M**—7-9, Oct. 4- Nov. 8 (6 meetings), FoIH 201  
(No late fee through Oct. 1)

**Winter Special Term** Sec 2 **M**—7-9, Jan. 3-Feb. 7 (6 meetings), FoIH 201

*(Andrea Hinding, whose academic field is history, has served as chairman of the Women's Studies Committee of the College of Liberal Arts and is the curator of the University Social Welfare History Archives.)*

**IC 0010 WILD ANIMALS OF THE NORTH WOODS.** No credit, \$26.

**new**

Timber wolves, moose, squirrels and mice, beaver, deer, hawks, bears, and caribou. These and other wild animals are not so far from the Twin Cities. Learn about the natural history of the Minnesota north woods and of the mammals and birds that live there. Examine the effect human civilization—forestry, mining, etc.—has had on the area and its inhabitants. The animals will be presented in an

Symbols, abbreviations, off-campus class locations begin on page 401.



ecological framework, with emphasis on their interactions with each other and with their surroundings. The format will be illustrated lectures shared by experts on particular species. An optional weekend field trip to northeastern Minnesota will be conducted for a limited number (cost extra) to look at northern habitats in winter.

**Winter Spec Term** Sec 1 **M**—7-9, Jan. 3-Feb. 14 (7 meetings), HodsonH 495, StP Campus, Jordan

*(Peter A. Jordan is an Associate Professor in the Entomology, Fisheries and Wildlife Department.)*

(See other Minnesota courses, page 313)

**\*IC 0011 CREATIVE WRITING WORKSHOP.** No credit, \$30.

This workshop will provide a constructive audience for people who have a sustained interest in creative writing and who have some experience. More attention will be paid to style and effect than to elementary writing mechanics. Come to the first session ready to read from your work and to listen. (Limited to 18 students)

**Fall Spec Term** Sec 1 **W**—7-9, Sept. 29-Nov. 17 (8 meetings), LindH 303, Thomas

*(Jane Resh Thomas, a free lance writer, has taught composition courses in Extension Classes and the General College.)*

**\*IC 0012 NEWSLETTER WORKSHOP.** No credit, \$22.

Does your association, business, club, or organization issue a newsletter? Gain or improve your newsletter production skills by taking this workshop. Topics to be covered: the basics of journalistic writing; publication formats and processes; copy editing symbols and practices; writing various styles of headlines; handling of illustrations; and principles of page makeup and publication layout. This course is not a lecture series, but rather six laboratory sessions of instruction and supervised practice. (Limited to 24 students)

**Winter Spec Term** Sec 1 **W**—7-9, Jan. 5-Feb. 9 (6 meetings), MurH 302, Sim

*(John C. Sim is a Professor of Journalism and Mass Communication.)*

**IC 0013 WOMEN AND LANGUAGE WORKSHOP.** No credit, \$22.

*Mistress and master, to mother and to father, a free woman and a free man—why have very different meanings evolved for seemingly parallel terms? This course will examine some of the many ways in which our language both reflects and shapes the roles, the status and the power of women and men. Class members will look at "masculine" and "feminine" speech patterns, value-laden connotations of gender terms, word derivations and changes occurring in current usage. Format will be a combination of lecture, discussion, observation and practice in the use of assertive speech patterns.*

**Winter Spec Term** Sec 1 **T**—7-9, Jan. 4-Feb. 8 (6 meetings), FoIH 209, George-Geisser

*(Mary Lee George-Geisser, whose academic field is linguistics, is active in Twin Cities women's social change organizations and has published articles on language and on other aspects of feminism.)*

**IC 0014 CONTEMPORARY WOMEN POETS.** No credit, \$22.

As the women's movement has gathered strength, women poets have found a growing audience. We will read the poems of such writers as Anne Sexton, Erica Jong, Sylvia Plath, and Adrienne Rich. In addition to reading their poems as separate artifacts and as representative of an individual poet's work, we will also question the organization of the course: are connections between these poets strong enough and is their talent sufficient to justify separating their work from the other literature of a nation or a period?

**Spring Spec Term** Sec 1 **W**—7-9, Mar. 30-May 4 (6 meetings), Bu 125, Thomas

*(Jane Resh Thomas, a free-lance writer, has taught composition courses in Extension Classes and the General College.)*

Symbols, abbreviations, off-campus class locations begin on page 401.

**\*IC 0015 CURRENT ISSUES IN NUTRITION: FALLACIES AND FACTS.** No credit, \$28.

**new**

The aim of this course is to give class members tools to cut through some of the confusion and sensationalism surrounding current issues in nutrition. Topics will include: cholesterol and coronary heart disease; saturated and unsaturated fats; diets and obesity; processed vs. natural foods; and the effectiveness of regulatory agencies and of nutrition research methods in protecting the consumer. Ample time will be allowed for questions and discussion relating to these topics and others as suggested by class members. (Limited to 60 students)

**Fall Spec Term** Sec 1 Th—7-9:30, Sept. 30-Nov. 4 (6 meetings),  
Hillside JHS, Maplewood; Hegarty

(Patrick V. Hegarty is an Associate Professor in Food Science and Nutrition.)

**IC 0017 THE ETHNIC EXPERIENCE IN AMERICA.** No credit, \$18.

**new**

"The new ethnicity," according to author Michael Novak, "entails a growing appreciation for the potential wisdom of one's gut reactions and their historical roots . . ." Many third and fourth generation Americans are turning back upon their own experience in order to understand and prize their ethnic heritage. With this phenomenon as an important backdrop, this course will examine mainly the experience of the "less favored" minorities such as Poles, Italians, Jews, Irish, Scandinavians, Slavs, etc. The "melting pot" mythology, ethnic literary responses and contemporary attempts to assess the ethnic experience and predict its future will be discussed. Oral history will be looked at as an exciting means of preserving our ethnic heritage.

**Fall Spec Term** Sec 1 T—7-8:40, Sept. 28-Nov. 2 (6 meetings),  
LindH 320, Murphy

(Michael P. Murphy is an advisor and instructor in Urban Studies)

**IC 0018 JEWISH MYSTICISM.** No credit, \$22.

**new**

This course will survey the concepts and experiences of Jewish mystics from Biblical times to the present. Topics will include messianism, Chassidism, and current existential ideas as they are interpreted by traditional Judaism, by mystics and by Jewish historians and thinkers. Comparisons will at times be made with mysticism in the early church, later Christianity, Islam, Buddhism, and pagan thought. We will draw on psychology, history and philosophy in order to encourage the broadest possible understanding of Jewish mysticism as a persistent, though minority, trend throughout Jewish life.

**Fall Spec Term** Sec 1 T—7-9, Oct. 12-Nov. 16 (6 meetings)

(no late fee through Oct. 8), Jewish Community Center,  
St. Louis Park, Brin

(Ruth Brin, a free-lance writer, has taught courses on Jewish mysticism and on other religious topics in local colleges and community centers.)

**\*IC 0020 ARCHITECTURE AND MINNESOTA: HISTORICAL CONTEXT, PRESENT FORCES, FUTURE IMAGES.** No credit, \$18 each term.

**new**

An introduction to architecture: the past, present and future. The course will look at the interaction of the architect with other groups and forces shaping the built environment. The state of Minnesota will be used as a matrix for study. Note: students may register for more than one section.

**Sec 1. Historical Context** From the earliest builders in Minnesota, the American Indians, through the sixties to the way, why and where we live today. Historic preservation/renovation will be one focus: Who decides? What is the process? How do Twin Cities residents become involved? *Optional Sunday tour; further details available in class.* (Limited to 40 students)

**Sec 2. Present Forces** The state of the art locally, with a discussion of the forces shaping our urban environment: What are the roles of planners, power groups, free enterprise, the public? How do human needs, aesthetics, environmental concerns and politics interact? (Limited to 40 students)

**Sec 3. Future Images** The flow and trend of architecture in the future, with reference to the Twin Cities. Consideration of changing lifestyles; transportation and leisure; energy sources; the growing impact of government and corporations on urban development. *Optional Sunday tour; further details available in class.* (Limited to 40 students)

Symbols, abbreviations, off-campus class locations begin on page 401.

<b>Fall Special Term</b>	Sec 1	M—6:20-8:50, Oct. 11-Nov. 1 (4 meetings), Arch 15 (no late fee through Oct. 8)
<b>Winter Special Term</b>	Sec 2	M—6:20-8:50, Jan. 17-Feb. 7 (4 meetings), Arch 15 (no late fee through Jan. 14)
<b>Spring Special Term</b>	Sec 3	M—6:20-8:50, Apr. 11-May 2 (4 meetings), Arch 15 (no late fee through Apr. 8), Allan, Ohlhausen

*(Gerald E. Allan is a practicing architect and assistant professor and Marcia Ohlhausen is a lecturer in the School of Architecture.)*

(See other Minnesota courses, page 313)

**IC 0022 METRICALLY SPEAKING.** No credit, \$18.

Metrification: the United States has begun a transition that will result in the metric system replacing our customary system as the predominant measurement language. We will soon be communicating in metres, kilograms, and litres instead of yards, pounds, and quarts. Being familiar with this system is now an asset and will before long be a necessity in the office, at home, in the factory, stores and in traveling. The history of measurement and the U.S. adoption of the metric system will be examined, but the major focus of this course will be on learning and practicing the system.

**new**

**Spring Spec Term** Sec 1 Th—7-9, Mar. 31-April 28 (5 meetings),  
LindH 217, Wenberg

*(Lawrence S. Wenberg is the assistant director of the Minnesota Metric Center in the University's Institute of Technology.)*

**★IC 0024 THE ARTIST'S HAT.** No credit, \$29 plus \$6 special fee. Total \$35.

The purpose of this art appreciation course is twofold: to heighten our awareness of fine arts in the Twin Cities environment and to try on the artist's hat ourselves, by experimenting with collage and/or another creative project. We will also look at art's relationship to society, history, and to ourselves. Class sessions will be divided between films, discussion, conversations with local artists, a field trip, and at least three sessions for work on individual projects. (Limited to 25 students)

**new**

**Winter Spec Term** Sec 1 Th—7-9, Jan. 6-Feb. 24 (eight meetings),  
St Stephens Church 208, WStP; Conrad

*(Eleanor Conrad, a professional artist and teacher, has had several showings of her work locally.)*

**IC 0026 TAXATION AND THE CONSUMER.** No credit, \$22.

Tax season again! This course will look at taxes of all varieties—income, estate and gift, sales, and property—and at the theory behind them and the procedures associated with them. We will attempt to clarify the tax system at the different levels of government and to explain how recent changes and proposed changes affect taxpayers and consumers. Practical applications to our own situations will be encouraged.

**new**

**Winter Spec Term** Sec 1 T—7-9, Jan. 4-Feb. 8 (6 meetings), Jones 2, Kahn

*(Peter T. Kahn is a practicing attorney and instructor in the Business Studies Division of the General College.)*

**IC 0027 WILLS AND ESTATES: INFORMAL APPROACHES TO PEACE OF MIND.** No credit, \$11.

Are you thinking about writing a will? Concerned that your estate be administered according to your wishes? This course will attempt to cut through the confusion which surrounds wills and probate and to clarify some of the issues and procedures involved. We will discuss the inheritance of property after death, the reasons for and legal requirements of wills, and the procedures involved in administering a decedent's estate.

**new**

**Spring Spec Term** Sec 1 Sa—10 a.m.-12, April 2-16 (3 meetings), NH 207, Hower

*(Dennis R. Hower is an associate professor and coordinator of the Business Studies Division of the General College.)*

Symbols, abbreviations, off-campus class locations begin on page 401.

**IC 0028 FROM HERE TO INFINITY: LECTURES ON ASTRONOMY.** No credit, \$18.

In this series of lectures Prof. Karlis Kaufmanis will take you on a guided tour of the universe to see what astronomers are learning about it. Beginning at home, with our spaceship earth, the tour will progress into the farthest reaches of space. Lecture topics are:

**new**

The Spaceship Called Earth  
The Restless Solar Family  
Will the Sun Shine Forever?  
Pulsars, Black Holes and Other Oddities  
Pulsating Giants—the Lighthouses of Space  
Is Ours an Expanding or Pulsating Universe?

**Winter Spec Term** Sec 1 Th—7-8:40, Jan. 3-Feb. 10 (6 meetings),  
Ph 166, Kaufmanis

*(Astronomy Professor Karlis Kaufmanis is perhaps best-known locally for his "Star of Bethlehem" lecture.)*

**IC 0029 PIONEER MINNESOTA.** No credit, \$22.

Six evenings devoted to reviewing what is known about the lives of people who settled in the Minnesota region during the three decades preceding statehood. Who were these pioneers? What brought them here? How did they travel to Minnesota country? How did they feel about living here? Through the use of lectures, films, slides and recordings, we will acquaint ourselves with the pioneers themselves, their occupations, institutions, social and cultural life, and politics.

**new**

**Winter Spec Term** Sec 1 T—7-9, Jan. 4-Feb. 8 (6 meetings), FolH 308, Moen

*(Professor Norman W. Moen of the General College has recently developed a sequence of courses in Minnesota Studies, including Minnesota Arts and Letters, Indians, Biography, Resources and History.)*

**IC 0030 MINNESOTA HISTORY: POLITICS AND PERSONALITIES FROM THE DEPRESSION TO THE TROUBLED SIXTIES.** No credit, \$22.

Where were you ten years ago? or forty? Do you remember Gov. Floyd B. Olson ("Call me a radical!") and the Great Truck Driver's Strike of 1934? Harold Stassen, "the Boy Wonder"? Luther Youngdahl and "the role of the practicing Christian in politics"? Hubert H. Humphrey and the founding of the DFL? The Minnesota Miracle and the Stassen-Eisenhower rivalry? The attempt of the DFL to dump a sitting governor? Through a lecture and discussion format you'll have plenty of opportunity to refresh your memory and share your experiences. If you were there, relive it and pass it on; if you weren't, come join it.

**Fall Spec Term** Sec 1 T—7-9, Sept. 28-Nov. 2 (6 meetings), Arch 40, Moen

*(Professor Norman W. Moen of the General College has recently developed a sequence of courses in Minnesota Studies, including Minnesota Arts and Letters, Indians, Biography, Resources and History.)*

**IC 0031 ART AND ARCHITECTURE OF THE JEWISH PEOPLE.** No credit, \$29

This course will illustrate important artistic and architectural monuments left by Jews throughout their known history. It will also explore the historical and cultural context within which Jewish artistic monuments were created, the lively artistic exchanges between Gentile and Jewish cultures, and Jewish attitudes toward art in different historical periods. Jewish art, architecture, manuscripts and artists will be discussed, within a history extending from the times of Saul and the Temple of Solomon, through the periods of residence in Babylonia and, after the Diaspora, throughout the Mediterranean world, to the age of emancipation in Europe and the modern state of Israel.

**Fall Spec Term** Sec 1 Th—7-9, Sept. 30-Nov. 18 (8 meetings), Jones 10, Chiat

*(Marilyn Chiat, instructor in the Art History Department, is completing a doctoral dissertation in the early art and architecture of the Jewish people.)*

**IC 0032 THE AMERICAN WORK ETHIC.** No credit, \$28

In trying to understand the enormous importance of work in the lives of most Americans, we will explore the cultural values associated with work, and also such specific matters as its economic and psychic significance, relationships between

Symbols, abbreviations, off-campus class locations begin on page 401.

private and working life (including whether such a distinction is genuine), and the employee's role in management. Our purpose is double-edged: to study the evolving work ethic in America, and critically assess our own ideas about work. The format will be primarily discussion, each session centered on a modest bit of reading done in advance.

**Spring Spec Term** Sec 1 **M**—6:20-8:50, Mar. 28-May 2 (6 meetings),  
LindH 217, Kell

*(William R. Kell's academic field is American Studies, the interdisciplinary study of American life and culture.)*

**IC 0033 MASCULINE/FEMININE: INFLUENCES ON CHILDREN'S SEX-ROLE DEVELOPMENT.** No credit, \$22.

This course will examine the processes by which children develop masculine or feminine personalities and sex-role concepts. Topics include the psychological and biological differences between boys and girls; the current theories of sex-role development; the role that parents play in that development; ways that other factors, such as TV, books, other children, teachers, etc., affect children. The course format will be lectures and class discussions, plus some testing of our attitudes towards sex-roles. The course is designed specifically for parents and non-parents who want to become more aware of their own influence on children's sex-role development.

**Fall Spec Term** Sec 1 **T**—7-9; Sept. 28-Nov. 2 (6 meetings), CD 216, Yonas

*(Patricia M. Yonas, a former instructor and research associate in the Institute of Child Development, is currently working in the Dept. of Special Education.)*

**\*IC 0034 FAMILY COMMUNICATIONS: WHAT ARE YOUR RULES?** No credit, \$22.

Are you—or another member of your family—a people pleaser? blamer? avoider? How has the way your parents treated you influenced your self-image, expectations, and the type of parent you are now or might become? A family is a rule-governed system whose impact on its members is felt all their lives. This course will describe how family systems function: the rules that are followed, how families raise or lower self-esteem, communication styles, and roles that family members play. The course will provide a better intellectual understanding of family systems; it is not a therapy group. (Limited to 40 students)

**Spring Spec Term** Sec 1 **T**—7-9:00, Mar. 29-May 3 (6 meetings), Arch 15,  
Willmore

*(Doloris Willmore is a counselor in the General College, with an interest in family systems.)*

**IC 0037 TOWARDS A HEALTHY ORGANIZATION.** No credit, \$22.

This course will explore ways to create a healthy organizational climate—one which fosters personal growth, self-fulfillment and creativity within a work setting. Organizational Development will be our tool for understanding and improving the formal and informal systems that make up a total organization. We will examine how people communicate within an organization structure and will work on intergroup relationships and goal-setting processes. The Organizational Development approach is most useful with involvement of the entire work unit as a team—but individuals will find the analysis, interpersonal skills and decision-making techniques useful.

**Winter Spec Term** Sec 1 **W**—7-9, Jan. 5-Feb. 9 (6 meetings), LindH 325, Panger

*(Marie Panger teaches creativity, communication and organizational development courses and is a consultant and trainer with local business and industry.)*

**IC 0038 WRITING PERSONALLY: LETTERS YOU ALWAYS WANTED TO WRITE—AND STILL CAN.** No credit, \$18.

Good letters, like gifts freely given, strengthen bonds and bring delight to both writer and receiver. Sometimes, however, personal letter writing is more a chore than a delight. The difficulty—and the delight—lies in knowing what to say, finding one's own voice, and feeling uninhibited in writing. Explore and practice this special communication skill. Read and discuss selected letters and examine their

Symbols, abbreviations, off-campus class locations begin on page 401.

design. Write letters—of friendship, sympathy, invitation, thanks, congratulation, opinion—and share with class members the problems and joys of the endeavor.

**Spring Spec Term** Sec 1 **W**—7-9, Mar. 30-Apr. 27 (5 meetings), NH 211, Hansen

*(Associate Professor Evelyn U. Hansen teaches communications courses in the General College.)*

**IC 0039 SCANDINAVIAN LITERATURE.** No credit, \$28.

**Winter Spec Term** Sec 1 **M**—7-9:30, Jan. 3, 10, 17, 24, 31, Feb. 7 (6 meetings),  
Cambridge HS



# institute of technology (IoT)

Your attention is called to the Professional Development Recognition Program in engineering and Science, page 222.

*Morris E. Nicholson, Professor of Materials Science, and Director of Continuing Education in Engineering and Science*

*Wayne Schmaedeke, Director of Operations Planning at Minneapolis Gas Company*

**★IoT 0001 FUNDAMENTALS OF ENGINEERING REVIEW.** No credit, \$62.

This course is designed particularly for individuals who plan to take the Engineer in Training examination required for becoming a registered Professional Engineer. The course consists of 19 videotapes covering mathematics, chemistry, materials, statics, dynamics, strength of materials, thermodynamics, electric circuits, fluid mechanics and engineering economics, with tutorial instruction. (Prereq Bachelors degree in Engineering, Physics or Mathematics. Limited to 50 students)

**Winter Qtr Sec 1 W—6-8:30, MechE 108, Nicholson**

**★IoT 0009 FUNDAMENTALS OF ENGINEERING REVIEW.** No credit, \$31.

This videotape series consists of 19 tapes covering mathematics, chemistry, materials, statics, dynamics, strength of materials, thermodynamics, electric circuits, fluid mechanics, engineering economics. Presented without tutorial instruction. The text, **Fundamentals of Engineering Review**, provides problems and solutions of all of those problems covered by the videotapes, plus additional problems. (Limited to 50 students)

**Spec Term Sec 1 W—6-8:30, Sept. 29-Oct. 27, MechE 108, Nicholson**

(See also refresher courses in civil engineering, page 100; and electrical engineering, page 125.)

**IoT 5011, 5012, 5013 MATHEMATICS FOR TECHNICAL MANAGEMENT.** 3 credits each quarter. \$51 each quarter.

This course provides technical managers with deterministic and probabilistic mathematical techniques for quantitative decision-making. **5011:** Review of calculus; matrices algebra of sets, calculus of finite differences, optimization, simulation, mathematical programming, and regression analysis. **5012:** Basic probabilities, statistical populations, principles of sampling, statistical estimation, statistical decision theory. **5013:** Probabilistic models; stochastic processes, The Markov Process, Monte Carlo method, queuing theory, and decision models. (No prereq, but background in calculus, differential equations recommended. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr 5011 Sec 1 T—6-8:30, MechE 302, Schmaedeke**

**Winter Qtr 5012 Sec 2 T—6-8:30, MechE 302, Schmaedeke**

**Spring Qtr 5013 Sec 3 T—6-8:30, MechE 302, Schmaedeke**

## islamic

(See Near and Middle Eastern Studies, page 232)

## 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*

*Larry A. Fischer, Coordinator, CLU courses*

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*Orem O. Robbins, President, Security Life*  
*Garry Rollins, Lecturer in Insurance*  
*Dwain Sell, Associate Counsel, North American Life & Casualty*  
*Andrew F. Whitman, Professor of Insurance*  
*C. Arthur Williams, Professor and Dean of Business Administration*

**Ins 3100 RISK MANAGEMENT AND INSURANCE.** 4 degree credits, \$62. (IS)

Recognition, measurement, and evaluation of insurable property, liability, and personnel risks of firms and families. Tools of risk management; retention, loss prevention, transfer, and others with emphasis on insurance. Design and implementation of the optimum risk management program. Selection of insurers, insurance pricing methods, and preparation for loss adjustments. Public policy and risk management, particularly government regulation of insurance, social insurance, and automobile insurance problems. (No prereq. May not be taken S-N)

**Fall Qtr** ★Sec 1 T—6-8:30, WCCO Radio Bldg 512, Mpls, Rollins  
(Limit 50 students)  
**Fall Sem** Sec 2 M—8:15-9:55, AndH 250, Whitman  
**Winter Qtr** ★Sec 3 M—7-9:30, Kellogg HS 167-169, Little Canada  
(Limit 35 students)  
Sec 4 T—6:20-8:50, AndH 230, Rollins  
**Spring Qtr** Sec 5 M—6:20-8:50, AndH 330, Williams

**Ins 3200 LIFE AND HEALTH INSURANCE.** 4 degree credits, \$8200. \$62.

Types of individual life and health insurance contracts, their uses, and their major provisions. Insurance and pension components of employee benefit 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 Qtr** Sec 1 T—6:20-8:50, AndH 330, Rollins

**Ins 3220 PROPERTY AND LIABILITY INSURANCE.** 4 degree credits, \$8220. \$62.

Types of property losses and their measurement. Legal doctrines and statutes creating liability risks for business firms, families, and other units. Analysis of major property and liability insurance contracts. How property and liability insurance is priced and marketed. Selection of an insurer. Social issues such as availability of insurance and no-fault automobile insurance. (Prereq 3100 or equiv.)

**Spring Qtr** Sec 1 M—4-6:30, AndH 250, Whitman

**IIA Ins 0021C GENERAL PRINCIPLES OF INSURANCE.** 3 certificate credits, \$46.50.

The University of Minnesota cooperates with the Insurance Institute of America by offering 0021C needed by those who wish to take the examination of the Institute. The course surveys general principles of risk management and insurance and their specific applications in property and liability fields. It serves as a foundation for further study in the Insurance Institute of America, CPCU, CIC or other academic and professional programs of Insurance education. The course covers principles of risk management; economic and social influences of insurance; types of risk and kinds of insurance; principles of loss adjustment, rate making; types of insurers; underwriting and reinsurance; analysis of insurance contracts and insurance regulation. The contents of additional IIA courses in property and casualty insurance (0022 and 0023) are included in Ins 3220 noted above.

**Fall Qtr** Sec 1 M—5:30-8, AndH 250, Whitman

Symbols, abbreviations, off-campus class locations begin on page 401.



## college of life underwriters (CLU)

Registration for all Minneapolis CLU classes must be completed with the Minneapolis CLU Chapter. No registrations will be taken by the University of Minnesota offices. Application blanks for enrollment may be obtained by calling 831-3730 or writing to State Office of Life Underwriters, Suite 161, 4620 West 77th Street, Edina, Minnesota 55435, or from the chairman, Charles C. Nordhaus, Massachusetts Mutual Life, 400 S. County Rd 18 (Shelard Plaza), Minneapolis, MN 55426, 544-9503.

Enrollment must be completed in the fall for two courses covering both Fall and Spring semester.

Registration is made for consecutive courses (CLU 0301C, 0302C, 0303C, 0304C, 0305C, 0306C, 0307C, 0308C, 0309C, 0310C). The American College will not allow a candidate to sit for the examination for course CLU 0310C unless he has completed the other nine examinations.

Many of the regularly listed courses elsewhere in this bulletin may be of assistance to those who are preparing for examination on other parts of the curriculum. Full information on the American College of Life Underwriters study program may be obtained from the annual announcement of CLU which is available at Extension offices or through the Minneapolis or St. Paul chapters of the Chartered Life Underwriters.

### **CLU 0301C ECONOMIC SECURITY AND INDIVIDUAL LIFE INSURANCE.** 3 certificate credits, \$46.50.

Designed as preparation for the January CLU examination in course 0301C. The subject matter will cover economic security needs, human behavior, professionalism and ethics in life and health insurance, individual life, health and annuity contracts, life insurance programming, types of insurers, investments, financial statements, risk selection, taxation and regulation of companies. (No prereq)

**Fall Sem**    Sec 1    **M**—4:40-6:40, 1750 Henn Ave So, Larkin  
                  Sec 2    **T**—4:30-6:30, 3701 Wayzata Blvd, Hollinger

### **CLU 0302C LIFE INSURANCE LAW AND MATHEMATICS.** 3 certificate credits, \$46.50.

Designed for preparation for the June CLU examination in course 0302C. The subject matter will cover legal aspects of contract formation, policy provisions, assignments, ownership rights, creditor rights, beneficiary designations, and disposition of life insurance proceeds. Also covered is the mathematics of life insurance as related to premiums, reserves, nonforfeiture values, surplus and dividends. (No prereq)

**Spring Sem**    Sec 1    **M**—4:40-6:40, 1750 Henn Ave So, Larkin  
                  Sec 2    **T**—4:30-6:30, 1750 Henn Ave So, Engel

### **CLU 0303C GROUP INSURANCE AND SOCIAL INSURANCE.** 3 certificate credits, \$46.50.

Designed for preparation for the January CLU examination in course 0303C. The subject matter will cover analysis of group life and health insurance, including products, marketing, underwriting, reinsurance, premiums, and reserves. Also, various governmental programs related to the economic problems of death, old age, unemployment, and disability. (No prereq)

**Fall Sem**    Sec 1    **M**—4:30-6:30, 1750 Henn Ave So, Brown  
                  Sec 2    **T**—4:30-6:30, 3701 Wayzata Blvd, Burke

### **CLU 0304C ECONOMICS.** 3 certificate credits, \$46.50.

Designed for preparation for the June CLU examination in course 0304C. The subject matter will cover economic principles, the governmental and banking institutions which have an effect on the national economy, national income, theory and application of price determination, business cycles, money and banking, monetary and fiscal policy, and international trade and finance. (No prereq)

Symbols, abbreviations, off-campus class locations begin on page 401.

**Spring Sem** Sec 1 **M**—4:30-6:30, 3701 Wayzata Blvd, Barker  
Sec 2 **T**—4:30-6:30, 3701 Wayzata Blvd, Barker

**CLU 0305C ACCOUNTING AND FINANCE.** 3 certificate credits, \$46.50.

Designed for preparation for the January CLU examination in course 0305C. The subject matter will cover basic accounting principles including data accumulation systems, income measurement, valuation of assets and liabilities, and financial statement analysis. The accounting process from the recording of a business transaction in the books of account to the final preparation of financial statements. Various sources of short-term, intermediate-term, and long-term funds available to business enterprise. (No prereq)

**Fall Sem** Sec 1 **M**—4:30-6:30, 3701 Wayzata Blvd, Barker

**CLU 0306C INVESTMENTS AND FAMILY FINANCIAL MANAGEMENT.** 3 certificate credits, \$46.50.

Designed for preparation for the June CLU examination in course 0306C. The subject matter will cover various aspects of investment principles and their application to family finance. Yields, limited income securities, investment markets, and valuation of common stock. Also family budgeting, property and liability insurance, mutual funds, variable annuities, and aspects of other investment media. (No prereq)

**Spring Sem** Sec 1 **W**—4:30-6:30, 3701 Wayzata Blvd, Crolley

**CLU 0307C INCOME TAXATION.** 3 certificate credits, \$46.50.

Designed for preparation for the January CLU examination in course 0307C. The subject matter will cover the federal income tax system with particular reference to the taxation of life insurance and annuities. The income taxation of individuals, sole proprietorships, partnerships, corporations, trusts, and estates. (No prereq)

**Fall Sem** Sec 1 **W**—4:30-6:30, 3701 Wayzata Blvd, Flannigan

**CLU 0308C PENSION PLANNING.** 3 certificate credits, \$46.50.

Designed for preparation for the June CLU examination in course 0308C. The subject matter will cover basic features of pension plans. Cost factors, funding instruments, and tax considerations involved in private pensions, profit-sharing plans, and tax-deferred annuities. Also, thrift and savings plans and plans for the self-employed. Effect of Employees Retirement Income Security Act of 1974 on covered areas. (No prereq)

**Spring Sem** Sec 1 **T**—4:30-6:30, 1750 Henn Ave So, Sell

**CLU 0309C BUSINESS INSURANCE.** 3 certificate credits, \$46.50.

Designed for preparation for the January CLU examination in course 0309C. The subject matter will cover business uses of life and health insurance, including proprietorship, partnership and corporation continuation problems and their solutions through the use of buy-sell agreements properly funded to preserve and distribute business values. Other business uses of life and health insurance, such as key man insurance, non-qualified deferred compensation plans and split-dollar plans. Also covered are corporate recapitalizations, professional corporations and business uses of property and liability insurance. (No prereq)

**Fall Sem** Sec 1 **M**—4-6, 1200 So 2 Ave, Robbins

**CLU 0310C ESTATE PLANNING AND TAXATION.** 3 certificate credits, \$46.50.

Designed for preparation for the June CLU examination in course 0310C. The subject matter will cover estate and tax planning, emphasizing the nature, valuation, disposition administration, and taxation of property. The use of revocable and irrevocable trusts, testamentary trusts, life insurance, powers of appointment, wills, lifetime gifts, and the marital deduction. Also, the role of life insurance in minimizing the financial problems of the estate owner. (Prereq 0309C)

**Spring Sem** Sec 1 **M**—4-6, 1200 So 2 Ave, Robbins

Symbols, abbreviations, off-campus class locations begin on page 401.

## italian (Ital)

*Josephine Mangano, Lecturer in French and Italian*  
*Arshi Pipa, Professor of French and Italian*

Cassette tapes are available to Extension Classes students on a take-home basis. Students can pick up tapes at the Learning Resources Center on the second floor of Walter Library or the second floor of Temporary South of Coffey on the St. Paul Campus. Students must present a fee statement when checking out tapes. Rental costs are covered by the special fees paid with tuition.

Learning Resource Center hours are: 8 a.m.-10 p.m., Monday-Thursday; 8 a.m.-6 p.m., Friday; 9 a.m.-6 p.m., Saturday; Sunday hours being planned.

The following non-language classes may be applied toward the CLA foreign language requirement, Route II: Ital 3555 [see page 359].

**Ital 1101-1102-1103 BEGINNING ITALIAN.** 5 degree credits each quarter. To be offered 1977-78.

**Ital 1104 INTERMEDIATE ITALIAN.** 5 degree credits, \$77.50.

Consolidation of basic structures and development of oral fluency through readings and structured discussions. (Prereq 1103 or equiv)

**Fall Sem Sec 1 M—6:20-9:15, FolH 103**

**Ital 3555 ITALIAN CULTURE IN THE MIDDLE AGES AND THE RENAISSANCE.** 5 degree credits, \$77.50. (◆\$38.75)

Italian culture instrumental in shaping Western civilization. Relates cultural aspects of politics, religion, philosophy, science, music, and the arts. Taught in English. Does not count toward Italian major. (No prereq. Knowledge of Italian helpful. May be applied toward the CLA foreign language requirement, Route II [see page 359].)

**Fall Qtr Sec 1 W—6:20-9:40, FolH 103**



## reading italian

Ital 0001 is specifically designed for individuals who desire only a reading knowledge of the language. The Italian language requirements for a graduate degree may also be satisfied by successfully passing an examination given at the end of the course. Graduate students should check with their advisers for specific language requirements in their field of study.

**Ital 0001 READING ITALIAN.** No credit, \$46.50.

This course is designed solely to impart a basic reading knowledge of the Italian language. At the end of one quarter the student may take the graduate Reading Examination in Italian. The department will certify to the Graduate School a reading knowledge of Italian upon successful completion of the examination. (No prereq. Must be taken S-N)

**Spring Qtr Sec 1 W—6:20-8:50, FolH 307**

Symbols, abbreviations, off-campus class locations begin on page 401.



## japanese

(See East Asian Languages)

## jewish studies

(See Near and Middle Eastern Studies, page 232)

## journalism and mass communication (Jour)

(See also Communications; Marketing; and Salesmanship)

*Walter H. Brovald, Associate Professor of Journalism*

*Roy E. Carter, Professor of Journalism*

*Everette Dennis, Associate Professor of Journalism*

*Peter Donaghue, Lecturer in Journalism*

*Irving Fang, Professor of Journalism*

*David Freund, Lecturer in Journalism*

*Donald Gillmor, Professor of Journalism*

*Virginia Harris, Associate Professor of Journalism*

*Robert L. Jones, Professor of Journalism*

*Lester L. Metz, Lecturer in Journalism*

*R. Smith Schuneman, Professor of Journalism*

*John C. Sim, Professor of Journalism*

*Willard L. Thompson, Professor of Journalism*

*Harold W. Wilson, Professor of Journalism*

### **A MAJOR IN JOURNALISM (ADVERTISING) CAN BE COMPLETED IN THE EVENING.**

Those courses required in the major are offered every 3 years. Interested students should discuss plans with an Extension counselor (373-3905).

#### **B.A. Major Sequence—Advertising**

All courses for the major except those marked below with a double asterisk (\*\*) must be taken A-N. No B.A. program may include more than 48 journalism credits.

#### **Required Preparatory Courses**

1001, 1005, Econ 1001-1002\*\* or 1014-1015\*\* or 3001-3002.\*\*

Pol 1001,\*\* Hist 1301-1302\*\* or 3822-3823.\*\*

Advertising Sequence—1201, Comp 1027,\*\* Psy 1001.\*\*

Symbols, abbreviations, off-campus class locations begin on page 401.

## Major Requirements

Advertising Sequence—3231, 3241, 5251, 5501, 5261, 5274; Mktg 3000; advertising management emphasis: 5263 and 4 additional 3xxx- or 5xxx-level cr; creative emphasis: 5272 and 4 additional 3xxx- or 5xxx-level cr (5221, 5233, 5252 recommended).

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

*Candidates for a journalism degree must meet all sequence and course requirements; they must consult with the Central Advisor in the School of Journalism and Mass Communication before enrolling in any 3xxx- or 5xxx-level journalism course. They are also advised that, effective August 1, 1976, a formal application for admission to the School of Journalism and Mass Communication is required; specific information about application procedures and requirements should be obtained from the School Central Advisor as early as possible.*

*Students who are not planning to seek a journalism degree who have professional experience or coursework equivalent to prerequisites may have requirements waived by the course instructor.*

### IC 0012 NEWSLETTER WORKSHOP. No credit. Sim.

(See Informal Courses, page 196.)

### Jour 1001 INTRODUCTION TO MASS COMMUNICATIONS. 2 degree credits, \$31. (♦\$15.50) (IS)

The nature, functions, and responsibilities of newspapers, magazines, radio and television, examined from the point of view of the professional journalist. News, opinion, entertainment, and persuasion functions; specialized communications, aspects of advertising. (Prereq completion of freshman English)

Fall Qtr Sec 1 M—6:20-8, MurH 311, Brovald

Spring Qtr Sec 2 M—6:20-8, MurH 311, Brovald

### Jour 1005 VISUAL COMMUNICATION. 3 degree credits, \$46.50. (♦\$23.25)

Introduction to functions of visual communication in news and advertising in print and electronic media. Evaluation and criticism of visuals in such areas as creative typography, photography. (No prereq)

Winter Qtr Sec 1 W—6:20-9, ForH 115, Schuneman

The following courses require passing the typing test for 25 WPM and a passing score in the MET test: Jour 1101, Jour 3231, Jour 3241, and Jour 5261. The typing test may be taken at 9 am, 2:30 pm, and the first night of class in the Journalism office, 111 MurH. The MET test can be taken at the Student Counseling Bureau which is located in 101 Eddy Hall, 373-4193. Students need a referral from counseling and must call counseling first before going to take the test. They may begin calling for referrals August 23.

### ★ Jour 1101 REPORTING. 5 degree credits. \$77.50. (IS)

Study and practice in fact-gathering and journalistic writing. Problems in news judgment and handling of news and news features. (Prereq C or better in 1001 and 1005 or grad status or Δ; type approx. 25 wpm. See note above on MET. Limited to 24 students)

Fall Sem Sec 1 Th—6:20-8, MurH 212, Donaghue

Spring Sem Sec 2 Th—6:20-8, MurH 212, Fang

### Jour 1201 PRINCIPLES OF ADVERTISING. 4 degree credits, \$62. (♦\$31) (IS)

Theory, principles and functions of advertising, its role in social, economic and marketing structure. Newspapers, magazines, radio, and television as advertising media. (Prereq 1001 or Δ)

Fall Qtr Sec 1 T—5:30-8, MurH 311, Thompson

Symbols, abbreviations, off-campus class locations begin on page 401.

See TV course, Jour 1201, Principles of Advertising, page 312.

**Jour 3021 MASS COMMUNICATION AND THE NEWS.** 4 degree credits, \$62. (♦\$31)

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, MurH 311, Sim

◆ **★Jour 3173 MAGAZINE WRITING AND EDITING.** 4 degree credits, \$62.

Writing feature articles for general, class, and trade publications, marketing articles; problems of magazine editing, layout, design, makeup. (Prereq †. Limited to 20 students)

Spring Qtr Sec 1 T—6:20-9, MurH 311

**★Jour 3231 ADVERTISING GRAPHICS.** 4 degree credits, \$62 plus \$5 course fee. Total \$67

Principles of design and layout. Use of photography, cold-type pasteup techniques. Appropriate use of typefaces. Color in layout and makeup. Hand composition. Individual projects. (Prereq for degree candidates, 2.50 avg in 1001, 1005, 1201; Comp 1027 where required by sequence; type 25 wpm; †. See note above on MET. Limited to 20 students)

Fall Qtr Sec 1 M—6:20-8:50, MurH 315, Wilson

**★Jour 3241 ADVERTISING COPYWRITING.** 4 degree credits. To be offered 1977-78.

**Jour 3776 MASS COMMUNICATIONS LAW.** 4 degree credits, \$62. (♦\$31)

◆ Brief historical background, First Amendment rights, basic law of defamation, free press and fair trial, access to news, access to the press, privacy, contempt, obscenity, the regulation of broadcasting and advertising, anti-trust controls, legal and ethical rules affecting journalistic practice. (Prereq 1101 or †)

Winter Qtr Sec 1 Th—6:20-9, MurH 311, Gillmor

**★Jour 5221 GRAPHIC ARTS: PROCESSES** (replaces 3221). 4 degree credits, \$68 plus \$5 course fee. Total \$73.

Evaluation of processes in graphic communication. Technique and production of illustration. Significant graphic arts development. Survey of printing processes and methods by lecture, field trip and film. Students are introduced to economic organization and technology changes in fields of printing and publishing. (No prereq. Limited to 30 students. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 M—6:20-8:50, MurH 311, Metz

**★Jour 5233 GRAPHIC DESIGN ANALYSIS.** 4 degree credits. To be offered 1977-78.

◆ **Jour 5251 PSYCHOLOGY OF ADVERTISING.** 4 degree credits, \$Psy 5751. \$68. (♦\$34)

Psychological analysis of the basic principles underlying advertising and selling. Consumer research is stressed. Research techniques for investigating advertising problems and the analysis of consumer wants are considered in detail. (Prereq Psy 1001. Meets concurrently with Psy 5751. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 W—6:20-8:50, WuH 230, Jones

**Jour 5261 ADVERTISING: MEDIA ANALYSIS.** 4 degree credits. To be offered 1977-78.

◆ **Jour 5263 ADVERTISING CAMPAIGN AND MEDIA STRATEGY.** 4 degree credits. To be offered 1977-78.

**★Jour 5272 ADVERTISING COPY-GRAPHICS.** 4 degree credits, \$68.

Copy and graphics design for print and television advertising. Preparation and presentation of ads and commercials for consumer, business, industrial, corporate, and public service advertisers. (Prereq for degree candidates, sr adv major, 3231, 3241, 5251, or †. Limited to 20 students. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 M—5:45-8:15, MurH 212, Harris, Wilson

**new**

Symbols, abbreviations, off-campus class locations begin on page 401.

**★Jour 5274 CURRENT ADVERTISING DEVELOPMENTS AND PROBLEMS.** 4 degree credits, \$68.

Creative, management, research, media, and technical developments in advertising. Specific problems, case studies in advertising-marketing process. (Prereq for degree candidates, sr advertising major, 5251, 5261, and either 5263 or 5272; others †. Limited to 20 students. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 T—6:20-9, MurH 302, Freund

**★Jour 5353 PHOTOGRAPHIC COMMUNICATION.** 4 degree credits, \$68.

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. Limited to 20 students. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 W—6:20-9, MurH 207, Schuneman

(See also photography courses in Arts, Studio; and Physics)

**Jour 5501 COMMUNICATION AND PUBLIC OPINION.** 4 degree credits, \$68. (IS)

Theories of communication processes and of persuasion and attitude change. Functions of interpersonal and mediated communication in diffusion of information and in opinion formation. (Prereq 15 credits in social sciences. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 W—6:20-8:50, MurH 308, Carter

**Jour 5601 HISTORY OF JOURNALISM.** 4 degree credits, \$68. (◆\$34) (IS)

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)

**Fall Qtr** Sec 1 W—6:20-9, MurH 308, Dennis

**Jour 5611 DEVELOPMENT OF AMERICAN BROADCASTING.** 4 degree credits, \$68. (◆\$34)

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—6:20-9, MurH 311, Fang

**Jour 5615 DEVELOPMENT OF PHOTOJOURNALISM AND DOCUMENTARY FILM.** 5 degree credits, \$85. (◆\$42.50)

History of these forms of visual communication and their utilization by the mass media. Principal contributors, visual styles, and changing evaluative criteria, 1839 to present. Analysis of important films, photographs from the period. Individual research projects involving primary data. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 T—6:20-9, MurH 308, Schuneman

**★Jour 5970 ADVANCED PROJECTS: LEGAL NEWS COVERAGE.** 1-4 degree credits (maximum 8 credits). \$17-\$68 each quarter.

An introduction to the legal process and legal research as it applies to news coverage of courts and law. Civil and criminal cases, original jurisdiction and appeals courts in media coverage. Trends in legal news reporting and ethical considerations. Several case studies involving local courts and media. (Prereq Jour 1101 or † or presently employed in communications industry. Limited to 24 students. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 W—6:20-8:50, MurH 311, Dennis, Freeman

Symbols, abbreviations, off-campus class locations begin on page 401.



## labor education

For information on non-credit conferences or workshops in labor education, please contact Labor Education Service, 447 Business Administration, University of Minnesota, Minneapolis, Minnesota 55455. Or inquiries may be addressed to Martin Duffy at the above address or call 373-4110 (or George O'Connell at 373-5380).

## landscape architecture (LA)

(See also Agriculture, Architecture and Horticultural Science)

*C. Gustaf Hard, Professor of Horticultural Science*

### LA 0001 LANDSCAPE ARCHITECTURE/REVIEW. No credit, \$62.

**new** Review of the activities and responsibilities of the contemporary landscape architect. The course is designed for those Landscape Architects who are preparing for the Uniform National Exam administered by the Minnesota State Registration Board. It is a review of activities and responsibilities considered pertinent to the practice of landscape architecture. Included in the review will be: history, professional practice, design, design implementation, other topics as appropriate. (Prereq qualified to take the UNE)

Fall Qtr Sec 1 Th—6:30-8:30, Arch 20

### LA 1024 THEORY OF LANDSCAPE DESIGN. 4 degree credits, \$62. (♦\$31)

◆ Analysis of design elements and forms involving line, direction, shape, proportion, and color, with emphasis on their function in design; a study of perception and man's relationship to his environment, and the social effects and psychological basis for design. Lectures and reference reading. Students will apply the theories studied to their own particular interest areas such as community development, issues in environmental quality, and residential landscape design. (No prereq)

Fall Qtr Sec 1 T—6:20-8:50, AlderH 415, StP Campus, Hard

## latin (Lat)

*Robert P. Sonkowsky, Professor in Classics*

Language laboratory fees are charged for courses in which use of the lab is required or recommended. Cassette tapes are available to extension classes students on a take home basis. Students can pick up tapes at the Learning Resources Center on the second floor of Walter Library or the second floor of Temporary South of Coffey on the St. Paul Campus. Students must present a fee statement when checking out tapes. Rental costs are covered by the special fees paid with tuition.

Learning Resource Center hours are: 8 a.m.-10 p.m., Monday-Thursday; 8 a.m.-6 p.m., Friday; 9 a.m.-6 p.m., Saturday; Sunday hours being planned.

Symbols, abbreviations, off-campus class locations begin on page 401.



**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 359): Clas 1019, 1042, 1043, 3008, 3162, 5006, 5073; Hist 1053, 3053; Hum 3012; Phil 3001, 3002.

**Lat 1101-1102-1103 LATIN.** 5 degree credits each quarter, \$77.50 plus \$5 course fee. Total \$82.50 each quarter. (IS)

Fifteen college credits of Latin for all ages: junior high, senior high and college students, pre- and post-college adults, families—the learning community. Programmed texts and tapes for home study permit self-pacing. Knowledge is broken up into isolated bits, which students master bit by bit, returning to previous bits as necessary. 90% success rate. Weekly one-hour discussions motivate learning, provide community, and explore humanistic educational dimensions of Classical Latin traditions. Courses meet concurrently each term. (No prereq for 1101; 1101 or § for 1102; 1102 or § for 1103)

<b>Fall Qtr</b>	<b>1101</b>	Sec 1	W—6:30-7:30, FoIH 304, 305, Sonkowsky
	<b>1102</b>	Sec 2	W—6:30-7:30, FoIH 304, 305, Sonkowsky
	<b>1103</b>	Sec 3	W—6:30-7:30, FoIH 304, 305, Sonkowsky
<b>Winter Qtr</b>	<b>1101</b>	Sec 4	W—6:30-7:30, FoIH 304, 305, Sonkowsky
	<b>1102</b>	Sec 5	W—6:30-7:30, FoIH 304, 305, Sonkowsky
	<b>1103</b>	Sec 6	W—6:30-7:30, FoIH 304, 305, Sonkowsky
<b>Spring Qtr</b>	<b>1101</b>	Sec 7	W—6:30-7:30, FoIH 304, 305, Sonkowsky
	<b>1102</b>	Sec 8	W—6:30-7:30, FoIH 304, 305, Sonkowsky
	<b>1103</b>	Sec 9	W—6:30-7:30, FoIH 304, 305, Sonkowsky

## latin american studies (LAS)

(See also Chicano Studies; Anth 5222, Peoples and Cultures of Middle America; Mus 5704, 5705, Latin American Music; Pol 5455, Latin American Government and Politics; Span 3605, Politics in Spanish and Latin American Literature)

*Ward J. Barrett, Professor of Geography*

**LAS 3131 INTRODUCTION TO LATIN AMERICAN STUDIES.** 4 degree credits, \$62. (♦\$31)

Lectures by faculty of many disciplines. Most emphasize modern conditions or their background, and all speak about their specialities in non-technical terms. Although lecturers vary from quarter to quarter, an attempt is made to give a balanced and wide ranging view of modern scholarship, from humanities and social sciences through agricultural and health sciences. All speakers have field experience in Latin America. Course coordinated by graduate supervisor who will also help with short paper on topic of student's choice. (No prereq)

**Spring Qtr** Sec 1 W—6:20-8:50, BlegH 330, Barrett

## law

For information on non-credit conferences or workshops in law, please contact Continuing Legal Education, 338 Nolte Center; telephone 373-5386.

(See also Business Law; Criminal Justice Studies; General College legal studies; and Sociology)

## library science (Lib)

*Harris McClaskey, Associate Professor of Library Science*

*Lowell Olson, Associate Professor of Library Science*

*Nancy Rohde, Assistant Professor of Library Science*

Symbols, abbreviations, off-campus class locations begin on page 401.

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, \$85 plus \$4 course fee. Total \$89.

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)

Fall Qtr Sec 1 TTh—4:30-6:30, SmithH 111, McClaskey  
Lab F—12:15-5

★Lib 5221 **RECORDS OF KNOWLEDGE.** 4 degree credits, \$68 plus \$4 course fee. Total \$72.

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)

Winter Qtr Sec 1 TTh—4:15-6, Ph 145, Rohde

Lib 5301 **READING, LISTENING, VIEWING GUIDANCE FOR YOUTH IN LIBRARIES.** 3 degree credits, \$51 plus \$4 course fee. Total \$55.

Philosophy and objectives of library service in schools and children's departments; guidance techniques; planning library programs. Review of relevant research related to reading, viewing, and listening, and survey of professional literature from various fields pertinent to understanding children and adolescents. (Prereq 5101, 5221, 5401. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 T—6:30-9, WaLib 339, Olson

★Lib 5401 **ORGANIZATION OF INFORMATION I.** 4 degree credits, \$68 plus \$4 course fee. Total \$72.

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)

Spring Qtr Sec 1 TTh—4:15-6, Ph 145

## linguistics (Ling)

(See also IC 0013, Women and Language Workshop; Engl 3851, The English Language; Phil 3231, Introduction to the Philosophy of Language; Psy 5054, Psychology of Language)

Larry G. Hutchinson, Associate Professor of Linguistics

Ling 3001 **INTRODUCTION TO LINGUISTICS.** 4 degree credits, \$3005, 5001. \$62. (◆ \$31)

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)

Fall Qtr Sec 1 W—6:20-8:50, FolH 406, Hutchinson

Ling 3301 **PHONETICS.** 4 degree credits, \$5301, \$5003. \$62. (◆ \$31)

Physiology and acoustics of speech sounds; practice and drill in production and perception. (Prereq 3001 or 13001 or 1. Meets concurrently with 5301, 5003)

Fall Sem Sec 1 Th—6:20-8:50, FolH 406



Symbols, abbreviations, off-campus class locations begin on page 401.

**Ling 5001 INTRODUCTION TO LINGUISTICS.** 4 degree credits, \$3001, 3005. \$68.  
See course description for 3001. (No prereq. Meets concurrently with 3001. Qualified students may register for graduate credit at the University of Minnesota)  
**Fall Qtr** Sec 1 **W**—6:20-8:50, FolH 406, Hutchinson

**Ling 5003 APPLIED PHONETICS.** 4 degree credits, \$3301, \$5301. \$68.  
Primarily for teachers of English as a second language. (Prereq 5001 or 15001 or †. Not open to linguistics majors. Meets concurrently with 3301, 5301. Qualified students may register for graduate credit at the University of Minnesota)  
**Fall Sem** Sec 1 **Th**—6:20-8:50, FolH 406

**Ling 5301 PHONETICS.** 4 degree credits, \$3301, \$5003. \$68.  
**new** See course description for 3301. (Prereq 3001 or 5001 or 15001 or †. Meets concurrently with 3301, 5003. Qualified students may register for graduate credit at the University of Minnesota)  
**Fall Sem** Sec 1 **Th**—6:20-8:50, FolH 406

**Ling 5721 ENGLISH AS A SECOND LANGUAGE: METHODS.** 4 degree credits, \$SeEd 5396. \$68.  
Linguistics applied to the teaching of English as a second language. Meets concurrently with SeEd 5396. (Prereq 3001 or 5001 or †. Qualified students may register for graduate credit at the University of Minnesota)  
**Winter Qtr** Sec 1 **T**—6:20-8:50, FolH 406

**Ling 5722 ENGLISH AS A SECOND LANGUAGE: PRACTICUM.** 3 degree credits, \$51.  
Observation of and practice in teaching English as a second language. (Prereq 5721 or †. Winter is a joint Day/Extension class limited to 5 Extension students. Limited to 12 students, Spring. Qualified students may register for graduate credit at the University of Minnesota)  
**Winter Qtr** Sec 1 **TTh**—3:45-5, FolH 306  
**Spring Qtr** Sec 2 **T**—6:20-8:50, FolH 306

**Ling 5821 SOCIOLINGUISTICS.** 4 degree credits, \$68. (♦ \$34)  
Social determinants of linguistic diversity, variability, and change; multilingualism; problems of linguistic minorities; language behavior and social control. (Prereq 3001 or 5001 or †. Qualified students may register for graduate credit at the University of Minnesota)  
**Spring Qtr** Sec 1 **M**—6:20-8:50, FolH 406



## management (Mgmt)

*Jack L. Caldwell, Lecturer in Management*  
*Paul V. Grambsch, Professor of Management*  
*Karen Hawley, Instructor in Management*  
*J. Stephen Heinen, Assistant Professor of Management*  
*Frank G. Seidel, Instructor in Management*  
*Precha Thavikulwat, Instructor in Management*  
*Albert Trostel, Instructor in Management*  
*Raymond E. Willis, Associate Professor of Management Science*

Symbols, abbreviations, off-campus class locations begin on page 401.

★Mgmt 3001 **FUNDAMENTALS OF MANAGEMENT.** 4 degree credits, \$62.

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 389]. **May not be taken S-N.** Limited to 40 students)

<b>Fall Qtr</b>	Sec 1	<b>M</b> —5:30-8, BlegH 145, Hawley
	Sec 2	<b>M</b> —5:30-8, BlegH 155, Grambsch
	Sec 3	<b>T</b> —5:30-8, BlegH 335, Seidel
	Sec 4	<b>W</b> —5:30-8, BlegH 110, Trostel
<b>Winter Qtr</b>	Sec 5	<b>M</b> —5:30-8, BlegH 155, Hawley
	Sec 6	<b>M</b> —5:30-8, BlegH 215, Thavikulwat
	Sec 7	<b>T</b> —5:30-8, BlegH 105, Seidel
	Sec 8	<b>W</b> —5:30-8, AndH 230, Trostel
<b>Spring Qtr</b>	Sec 9	<b>M</b> —5:30-8, BlegH 125, Hawley
	Sec 10	<b>M</b> —5:30-8, BlegH 255, Thavikulwat
	Sec 11	<b>T</b> —5:30-8, BlegH 135, Seidel
	Sec 12	<b>W</b> —5:30-8, BlegH 110, Trostel

★Mgmt 3002 **PSYCHOLOGY IN MANAGEMENT.** 4 degree credits, \$62.

Centers on development and application of behavior principles, methods, and skills which underlie managerial competence in preventing and solving problems within and between individuals and groups and aid in effective utilization of human resources. Various laboratory procedures are used to highlight concepts, methods and skills and furnish practice in applying them to management problems. (No prereq. **May not be taken S-N.** Limited to 36 students)

<b>Fall Sem</b>	Sec 1	<b>W</b> —6:20-8, BlegH 105, Thavikulwat
	Sec 2	<b>W</b> —8:15-9:55, BlegH 105, Heinen
<b>Spring Sem</b>	Sec 3	<b>W</b> —6:20-8, BlegH 105, Heinen
	Sec 4	<b>W</b> —8:15-9:55, BlegH 105, Heinen

★Mgmt 3004 **BUSINESS POLICY: STRATEGY FORMULATION AND IMPLEMENTATION.** 5 degree credits, \$77.50.

Undergraduate level integrating course designed to develop skill in the management functions of identifying and analyzing problems, establishing corporate or divisional goals; and designing realistic programs of action. Class time is devoted to case analysis and discussion. Students meet in small groups at other times to prepare cases and occasionally presentations to be made to the entire class. Students utilize data supplied in the case as well as concepts, tools, and theories (previously presented in other courses) as they bear on the solution of goal selection and strategy implementation problems. Usually the viewpoint of the general line manager (department, division, or executive level) is taken. (Prereq senior and completion of business core or final core course. **May not be taken S-N.** Limited to 35 students)

<b>Fall Sem</b>	Sec 1	<b>W</b> —6:20-8, BlegH 230, Caldwell
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★Mgmt 5175 **BUSINESS FORECASTING.** 4 degree credits, \$68.

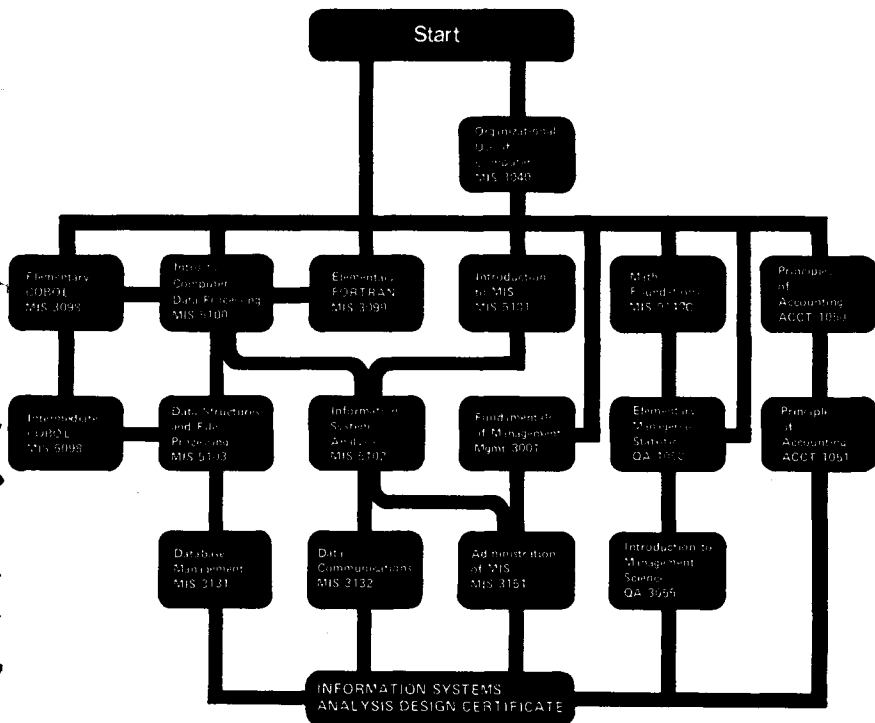
Methods of economic, social, and technological forecasting and applications to problems of managerial decision making and planning. (Prereq QA 1050 or 8191, Mgmt 3001 or 8001, or  $\epsilon$ . Limited to 40 students. **May not be taken S-N.** Qualified students may register for graduate credit at the University of Minnesota)

<b>Fall Qtr</b>	Sec 1	<b>W</b> —5:30-8:00, BlegH 240, Willis
<b>Spring Qtr</b>	Sec 2	<b>W</b> —5:30-8, BlegH 145, Willis

# management information systems (MIS)

(See also Computer, Information, and Control Sciences)

**Carl R. Adams, Associate Professor of Management Information Systems**  
**Robert J. Ahlstrom, Director, Information Systems, Red Owl, Inc.**  
**John Anderson, Assistant Professor of Management Information Systems**  
**Robert P. Bostrom, Instructor in Management Information Systems**  
**Norman L. Chevany, Professor of Management Information Systems**  
**John C. Cosgrove, Programmer, University Computer Center**  
**Gary W. Dickson, Professor of Management Information Systems**  
**Gordon C. Everest, Assistant Professor of Management Information Systems**  
**Jay R. Hamann, Assistant Professor of Management Information Systems**  
**J. Scott Hamilton, Instructor in Management Information Systems**  
**Thomas R. Hoffmann, Professor of Management Information Systems**  
**Blake Ives, Instructor in Management Information Systems**  
**Nancy J. Johnson, Instructor in Management Information Systems**  
**Ernest L. Larson, Senior Staff Consultant, Control Data Corp.**  
**J. David Naumann, Assistant Professor of Management Information Systems**  
**Margarethe H. Olson, Instructor in Management Information Systems**  
**Roger Schroeder, Associate Professor of Management Information Systems**  
**Dennis G. Severance, Associate Professor of Management Information Systems**  
**Ronald D. Visness, Assistant Director, Minnesota Energy Agency**



Symbols, abbreviations, off-campus class locations begin on page 401.

# schedule for programming courses

MIS 3098, 3099 and 5098 are scheduled to meet concurrently. Students must register for a particular section, but after the first meeting of their section, may attend any of the sections.

Fall Qtr	Sec 1	M—6-10, BlegH 5, Johnson
	Sec 2	T—6-10, BlegH 5
	Sec 3	W—6-10, BlegH 5
	Sec 4	Th—6-10, BlegH 5
Winter Qtr	Sec 5	M—6-10, BlegH 5, Johnson
	Sec 6	T—6-10, BlegH 5
	Sec 7	W—6-10, BlegH 5
	Sec 8	Th—6-10, BlegH 5
Spring Qtr	Sec 9	M—6-10, BlegH 5, Johnson
	Sec 10	T—6-10, BlegH 5
	Sec 11	W—6-10, BlegH 5
	Sec 12	Th—6-10, BlegH 5

*Students with programming experience or other data processing experience may complete an equivalency examination for MIS 3098, 3099 or 5100. Students who believe they are qualified should contact Extension Counseling (373-3905).*

## COMPUTER PROGRAMMING COURSES

Students in the MIS programming modules learn to program by writing programs. No lectures are presented; the appropriate text, plus course materials which are handed out at the first class meeting, provide the student complete course material. Students **must attend their section at 6 p.m. during the first week of class** to obtain procedural instructions, due dates, and course assignments. After that, the student needs to attend only 1 (to take a quiz, or 2) for assistance with a programming problem. After the first class meeting students may come to the programming laboratory at any time M, T, W, or Th, 6-10 p.m.

### MIS 3098 ELEMENTARY COBOL. 1 degree credit \$15.50 plus \$10 special fee. Total \$25.50.

An introduction to programming in the COBOL language. COBOL is the most widely used business data processing language. In the self-paced structure, the student will complete a structured set of COBOL programs and several short quizzes on or before scheduled dates. Consultants provide student assistance and administer quizzes. (No prereq) See schedule above.

### MIS 3099 ELEMENTARY FORTRAN. 1 degree credit \$15.50 plus \$10 special fee. Total \$25.50.

An introduction to programming in the FORTRAN language. FORTRAN is used primarily for programming analytical problems. In the business environment it is used where much computation is required; for example, forecasting, optimization, and statistical analyses. In the self-paced structure, the student will complete a structured set of FORTRAN programs and several short quizzes on or before scheduled due dates. Consultants provide student assistance and administer quizzes. (No prereq) See schedule above.

### MIS 5098 INTERMEDIATE COBOL. 1 degree credit, \$17 plus \$10 special fee. Total \$27.

Intermediate features of the COBOL programming language. In the self-paced structure, the student will complete a structured set of COBOL programs and several short quizzes on or before scheduled dates. Consultants provide students assistance and administer quizzes. (Prereq MIS 3098. Qualified students may register for graduate credit at the University of Minnesota.) See schedule above.

### MIS 0140C MATHEMATICAL FOUNDATIONS OF SYSTEMS ANALYSIS. 3 certificate credits, \$46.50.

The basic mathematical tools necessary for the development of quantitative skills. Boolean algebra, set theory, logic, sequences and series, iteration, linear algebra, and matrix manipulation. For those students with weak mathematical backgrounds or those who must refresh their skills. For those in the certificate program, MIS 0140C provides prerequisite skills for QA 1050, Elementary Managerial Statistics. (No prereq)

Symbols, abbreviations, off-campus class locations begin on page 401.

<b>Fall Qtr</b>	Sec 1	M—6-8:30, BlegH 115
<b>Winter Qtr</b>	Sec 2	M—6-8:30, BlegH 235
<b>Spring Qtr</b>	Sec 3	M—6-8:30, BlegH 235

**MIS 3040 ORGANIZATIONAL USE OF COMPUTERS.** 4 degree credits, \$62. (◆\$31)

A non-technical description of computers and computer systems in government and business. Introduces the kinds of people who work with computers and describes their activities in organizations. Presents current issues such as privacy, data banks, point-of-sale systems and future issues such as communications networks, mini and micro computer applications, electronic funds transfer. Discusses the history, status, and future of computer industry. (No prereq, intended for non-MIS students or students with no previous computer knowledge.)

<b>Fall Qtr</b>	Sec 1	T—6-9:20, AndH 210, Hamann
<b>Winter Qtr</b>	Sec 2	T—6-9:20, AndH 210, Hamann
<b>Spring Qtr</b>	Sec 3	T—6-9:20, AndH 210, Hamann

**★MIS 5100 INTRODUCTION TO COMPUTERS AND COMPUTER DATA PROCESSING.** 4 degree credits, \$68.

Elements of computer hardware and their functions. Computer software. Tools and methods for development of computer applications: Preparing computer programs. Acquisition, organization and management of computer resources. The computer industry. Future developments. (Prereq 3098 or 3099 or 13098 or 13099 or 1. Limited to 50 students. Qualified students may register for graduate credit at the University of Minnesota)

<b>Fall Qtr</b>	Sec 1	M—5-8:20, WCCO Radio Bldg 512, Mpls, Ahlstrom
	Sec 2	T—6-9:20, BlegH 250, Ives
	Sec 3	W—6-9:20, BlegH 250, Visness
	Sec 4	Th—6-9:20, BlegH 250, Hoffmann
<b>Winter Qtr</b>	Sec 5	M—6-9:20, BlegH 250, Ahlstrom
	Sec 6	T—6-9:20, BlegH 250, Adams
	Sec 7	W—6-9:20, BlegH 250, Visness
<b>Spring Qtr</b>	Sec 8	M—6-9:20, BlegH 250, Ahlstrom
	Sec 9	W—6-9:20, BlegH 250, Visness

**★MIS 5101 INTRODUCTION TO MANAGEMENT INFORMATION SYSTEMS.** 4 degree credits, \$68.

An overview of MIS. Conceptual foundations of MIS including: concepts of information, humans as information processors, system concepts and information systems, management and organizational concepts relevant to MIS, decision making concepts and the value of information for decision making. The structure of an MIS and its development, organization, management and evaluation. Emphasis is placed on the user/system interface. (No prereq, but recommended prior course in MIS or equivalent experience. (Limited to 50 students. Qualified students may register for graduate credit at the University of Minnesota)

<b>Fall Qtr</b>	Sec 1	M—6-9:20, BlegH 250, Olson
	Sec 2	W—6-9:20, BlegH 150, Bostrom
	Sec 3	Th—6-9:20, BlegH 155, Hamilton
<b>Winter Qtr</b>	Sec 4	M—5-8:20, WCCO Radio Bldg 512, Mpls, Chervany
	Sec 5	Th—6-9:20, BlegH 250, Olson
<b>Spring Qtr</b>	Sec 6	M—5-8:20, WCCO Radio Bldg 512, Mpls, Olson
	Sec 7	Th—6-9:20, BlegH 425, Hamilton

**★MIS 5102 INTRODUCTION TO INFORMATION SYSTEMS ANALYSIS.** 4 degree credits, \$68.

The phases within the systems life cycle for development of an information system application. Emphasis on the standards, tools and techniques required in the analysis of information requirements and in logical design. Processing alternatives and alternative approaches to systems design. (Prereq 5100, 5101. Limited to 40 students. Qualified students may register for graduate credit at the University of Minnesota)

Symbols, abbreviations, off-campus class locations begin on page 401.

<b>Fall Qtr</b>	Sec 1	T—6-9:20, BlegH 340, Naumann
	Sec 2	Sa—9 a.m.-12:20, BlegH 340
<b>Winter Qtr</b>	Sec 3	T—6-9:20, BlegH 335, Naumann
<b>Spring Qtr</b>	Sec 4	T—6-9:20, BlegH 340, Naumann

**★MIS 5103 DATA STRUCTURES AND FILE PROCESSING.** 4 degree credits, \$68 plus \$4 special fee. Total \$72.

Principles and techniques of data organization, physical representation of data in a computer system, and file processing strategy to meet user information requirements and system performance objectives. Topics include: theory of files, data storage devices, record design, sequential and random processing, linked structures, indexing, hashing, balanced search trees, multi-attribute search, inverted and multilist file organizations, hierarchic, network, and relational structure, sorting, data compression, and data integrity. Students establish and manipulate data structures on the University computer facility. (Prereq 5098, 5100 or 15098, 5100. Limited to 40 students. Qualified students may register for graduate credit at the University of Minnesota.)

<b>Fall Qtr</b>	Sec 1	Th—6-9:20, BlegH 240, Everest
<b>Winter Qtr</b>	Sec 2	Th—6-9:20, BlegH 240
<b>Spring Qtr</b>	Sec 3	Th—6-9:20, BlegH 435, Severance

**★MIS 3131 DATABASE MANAGEMENT SYSTEMS (replaces 0131C).** 4 degree credits, \$62 plus \$10 special fee. Total \$72.

Concepts and methods in the definition, creation, and management of data-bases for management information systems. Topics include: objectives of data-base management, design and evaluation of database management systems, theory of files, data structures, storage structures, interrogation, responsibilities of the database administrator, database integrity, security, and privacy. (Prereq 5103. Limited to 40 students)

<b>Winter Qtr</b>	Sec 1	W—6-9:20, BlegH 205, Bostrom
<b>Spring Qtr</b>	Sec 2	W—6-9:20, BlegH 215, Cosgrove

**★MIS 3132 DATA COMMUNICATIONS SYSTEMS (replaces 0132C).** 4 degree credits, \$62.

Characteristics of transmission facilities and networks, concentrators and multiplexors, terminals, modems and front end processors. Control hardware and software systems. The role of data communications in management information systems. (Prereq 5102. Limited to 40 students)

<b>Winter Qtr</b>	Sec 1	Th—6-9:20, BlegH 135, Larson
<b>Spring Qtr</b>	Sec 2	Th—6-9:20, BlegH 110, Larson

**★MIS 3151 ADMINISTRATION AND CONTROL OF MANAGEMENT INFORMATION SYSTEMS (replaces 0151C).** 4 degree credits, \$62.

Technical tools and management concepts required in the administration of the information systems function. Topics include the structure and management of computer operations, measurement of operating performance, budgeting and planning, project management techniques for systems and programming, personnel selection, training, and compensation, and the role of the information processing manager. (Prereq 5102 and Mgmt 3001. Limited to 40 students)

<b>Fall Qtr</b>	Sec 1	Th—6-9:20, BlegH 330
<b>Winter Qtr</b>	Sec 2	Th—6-9:20, BlegH 225
<b>Spring Qtr</b>	Sec 3	Th—6-9:20, BlegH 120

## marketing (Mktg)

Your attention is called to the Credit and Financial Management Certificate program, page 388; Journalism; and the General College marketing sequence.

*David G. Bassitt, Market Intelligence Specialist, Butler Manufacturing Co.*

*Stanley R. Cowle, Administrator, Hennepin County*

*Michael Dwyer, Marketing Research Director, Sperry Division, General Mills, Inc.*

Symbols, abbreviations, off-campus class locations begin on page 401.



*Samuel D. Druy, Vice President and General Merchandise Manager, Daytons (retired)*

*Patrick R. Fallon, Vice President, Stevenson and Assoc.*

*Robert M. Ferris, Marketing Officer, First National Bank of Minneapolis*

*Robert J. Holloway, Professor of Marketing*

*Richard L. Peterson, Management Consultant, Cooperative Management Resources*

*Dennis Rosen, Marketing Research, General Mills*

*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.*

*John R. Walton, Assistant Professor of Marketing*

*Douglas V. Wheeler, Assistant Product Manager, General Mills, Inc.*

**Mktg 0087C CREDITS AND COLLECTIONS.** 3 certificate credits, \$46.50.

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 115, T Walker

**★Mktg 3000 PRINCIPLES OF MARKETING.** 4 degree credits, \$62.

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 \$. May not be taken S-N. Limited to 50 students.)

**Fall Qtr** Sec 1 **M**—7-9:30, Minnetonka HS 119 (Limit 40 students)

Sec 2 **T**—6-8:30, BlegH 145, Wheeler

Sec 3 **W**—7-9:30, Sandburg JHS 213, Golden Valley; Rosen (limit 45 students)

Sec 4 **Th**—6-8:30, BlegH 440, Sauter

**Fall Sem** Sec 5 **M**—6:20-8, BlegH 135, Holloway

**Winter Qtr** Sec 6 **W**—6:20-8:50, BlegH 10, Ferris

Sec 7 **Sa**—9 a.m.-11, BlegH 425, Bassitt

Sec 8 **Th**—7-9:30, Sandburg JHS 213, Golden Valley, Sauter (Limit 45 students)

**Spring Sem** Sec 9 **M**—6:20-8, BlegH 120, Holloway

**Spring Qtr** Sec 10 **M**—6-8:30, BlegH 215, Dwyer

Sec 11 **T**—6-8:30, BlegH 145, Rosen

Sec 12 **W**—6:20-8:50, BlegH 420; Ferris

Sec 13 **Sa**—9 a.m.-11, BlegH 425, Bassitt

**★Mktg 3060 MARKETING SYSTEMS.** 4 degree credits, \$62.

The systems approach to marketing institutions and their interrelationships. Institutional, functional, and social aspects of distribution channels are examined. Particular emphasis is given to problems of channel selection and management, such as conflict, power, and control. Social issues and deviant systems are also examined. (Prereq Mktg 3000 or \$. Limited to 50 students)

**Spring Qtr** Sec 1 **Th**—5:30-8, BlegH 245, O Walker

**★Mktg 3065 RETAIL MANAGEMENT.** 4 degree credits, \$62.

Study of retailing principles, problems, and trends as they relate to various types of retailing institutions. Assignment of trade journals and supplementary readings for in-store study (buying and pricing) with a local retailer. (Prereq 3000. Limited to 50 students)

**Fall Qtr** Sec 1 **T**—6-8:30, AndH 350, Druy

**Spring Qtr** Sec 2 **T**—6-8:30, AndH 350, Druy

Symbols, abbreviations, off-campus class locations begin on page 401.

**Mktg 3075 SALES MANAGEMENT.** 4 degree credits, \$62. (IS)

Management of the personal selling function including sales organization; selection, training, compensation, motivation, supervision, and control of the field sales force; sales forecasting; sales budgets; sales and cost analysis. Case materials used extensively. (Prereq 3000)

**Fall Sem** Sec 1 M—6:20-8, BlegH 350, Peterson

**\*Mktg 3077 ADVERTISING AND SALES PROMOTION.** 4 degree credits, \$62.

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 45 students)

**Spring Qtr** Sec 1 W—6-8:30, BlegH 435, Fallon

**Mktg 3080 INDUSTRIAL AND GOVERNMENTAL PROCUREMENT.** 4 degree credits, \$62.

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, BlegH 10, Cowle

**\*Mktg 3095 MARKETING RESEARCH.** 4 degree credits, \$62.

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  $\epsilon$ . Limited to 50 students. May not be taken S-N)

**Fall Qtr** Sec 1 M—6-8:30, BlegH 10, Russick

**\*Mktg 3098 INTRODUCTION TO CONSUMER BEHAVIOR.** 4 degree credits, \$62. (IS)

Applications of the behavioral sciences to understanding human behavior in the marketplace. Topics include perception, learning, attitude theory and measurement, persuasion, motivation, personality, social and cultural influences, family decision-making, the social influence process, consumer decision-making strategies, managerial implications of consumer research and "consumerism." (Prereq 3000. Limited to 50 students)

**Fall Qtr** Sec 1 W—6-8:30, BlegH 425, Walton

## mathematics (Math)

Your attention is called to the Mathematics and Science Certificate Program, page 382; and the Undergraduate Development Certificates in Engineering and Sciences, pages 394-395; and mathematics courses in General College.

*Lawrence R. Harper, Assistant Professor of Mathematics*

*Walter James, Information Systems Manager, State of Minnesota, Lecturer in Mathematics*

*Howard Jenkins, Associate Professor of Mathematics*

*Harvey B. Keynes, Associate Professor of Mathematics*

*Chester L. Miracle, Associate Professor of Mathematics*

*Wayne W. Schmaedeke, Director of Operations Planning, Minnesota Gas Co., Lecturer in Mathematics*

*Gaylord P. Schwartz, Assistant Professor of Mathematics, St. Thomas College, Lecturer in Mathematics*

*George Sell, Professor of Mathematics*

*William Serbyn, Instructor in Mathematics*

Symbols, abbreviations, off-campus class locations begin on page 401.

*James G. Swenson, Instructor, Anoka Senior High, Lecturer in Mathematics*

*James E. Thompson, Associate Professor of Mathematics*

*V. Varadachari, Assistant Professor of Mathematics, Lakewood Community College, Lecturer in Mathematics*

*John L. Vitelli, Manager, Field Operating Systems, Commercial Division, Honeywell, Lecturer in Mathematics*

## mathematics prerequisites

Any student who has completed four years of high school mathematics, including solid geometry and trigonometry within the last two years with above average grades may register in Math 1211. However, if it has been more than two years since last mathematics course in high school was completed, the student should register in Math 1201, or possibly Math 0009 (intermediate algebra). The following rule usually applies: a student who has been out of high school five years or more, or who did not have higher algebra in high school should register in Math 0009. A student who knows very little algebra should register for Math 0006 (introductory algebra).

The entrance requirement for the Institute of Technology is four years of high school mathematics, including solid geometry and trigonometry or Math 1201.

## major in mathematics

Every effort is being made to offer a variety of upper division courses in mathematics in Extension Classes. Courses on the 5000 level are offered every second or third year. A limited number of courses at the 5xxx-level are offered each year pending sufficient enrollment in each course.

Over a period of years the minimum courses required for a mathematics major in CLA are offered through Extension Classes. A student who wishes to graduate with a major in mathematics should take Math 5601-2 and 5242-3. He or she should consult an advisor to determine which other courses to take.

## mathematics for nonmajors and prebusiness students

Math 1111, 1131, and Math 1142 are offered for the benefit of prebusiness students and are designed in cooperation with the College of Business Administration. The first course for business and accounting students is usually either 1111 or 1131. This is followed by Math 1142. These courses are also taken by non-mathematics majors who do not need a full four-quarter calculus course. Instead of starting with Math 1111 or 1131 some students should start with Math 0009. If it has been more than three years since students have completed their last mathematics course, then they should register for Math 0009.

## calculus refresher course

Math 5090 provides students who have been out of school for several years with the necessary background to enter more advanced courses on an equal footing with students who have just finished calculus.

**Math 0005 ARITHMETIC FOR ADULTS.** No credit, \$46.50.

A practical course for anyone needing an elementary background in Mathematics. It includes a study of the arithmetic of whole numbers, fractions, and decimal fractions with aids to quick and easy computation. 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.

Symbols, abbreviations, off-campus class locations begin on page 401.

It is a good course for shop persons 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 S-N or A-N. (No prereq)

**Fall Sem** Sec 1 Th—6-8:30, Arch 5  
**Spring Sem** Sec 2 M—6-8:30, Arch 5

(See also IC 0022, Metrically Speaking)

**Math 0006 ELEMENTARY ALGEBRA.** Entrance Credit, \$93.

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—6:20-7:45, VH 20  
 Sec 2 TTh—6-7:25, VH 311  
**Spring Sem** Sec 3 MW—6:20-7:45, VH 311  
 ★Sec 4 TTh—6:30-7:55, Irondale HS 105, New Brighton  
 (Limit 40 students)

**Math 0007 PLANE GEOMETRY.** Entrance credit, \$93.

Elements of plane geometry, equivalent to 1 year of high school plane geometry with adequate time given to each idea. (Prereq arithmetic. Entrance requirement for College of Liberal Arts and Institute of Technology).

**Fall Sem** Sec 1 MW—6-7:40, Aero 215

**Math 0008 SOLID GEOMETRY.** Entrance credit, \$46.50.

Lines, planes, dihedral and polyhedral angles, polyhedrons, surfaces, prisms, cylinders, cones, prisms, and spheres. Three-dimensional visualization and sketching. Numerical exercises in areas, volumes, weights. (Prereq plane geometry. Entrance requirement for Institute of Technology and College of Education. All calculus courses require solid geometry.)

**Spring Sem** Sec 1 W—6-7:40, Aero 215

**Math 0009 INTERMEDIATE ALGEBRA.** Entrance credit, \$77.50.

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 courses, with emphasis on the latter. (Prereq 0006 or equivalent. Entrance requirement for Institute of Technology and is a prereq to all I of T and Arts College Mathematics courses.)

**Fall Qtr** Sec 1 MW—5:15-7:20, Arch 55  
 Sec 2 TTh—6-8:05, VH 364  
 ★Sec 3 TTh—6:30-8:35, Richfield HS 143 (Limit 30 students)  
**Fall Sem** Sec 4 MW—6:20-7:45, VH 1  
 Sec 5 TTh—6-7:25, VH 1  
**Winter Qtr** Sec 6 MW—6-8:05, Arch 40  
 Sec 7 TTh—6-8:05, VH 364  
 ★Sec 8 TTh—6:30-8:45, Sandburg JHS 210, Golden Valley  
 (Limit 35 students)  
**Spring Sem** Sec 9 MW—6-7:25, VH 1  
 Sec 10 TTh—6:20-7:45, VH 1  
**Spring Qtr** ★Sec 11 MW—6:30-8:35, Kellogg HS 235  
 (Limit 30 students)

**Math 1005 FOUNDATIONS OF ARITHMETIC.** 3 degree credits, \$46.50.

Includes logical and axiomatic basis of rules for arithmetical operations with integers, rational numbers, and real irrational numbers; real number line and

Symbols, abbreviations, off-campus class locations begin on page 401.

inequalities as necessary background for teaching arithmetic in elementary school, topics from geometry and congruences; with some attention to history of subject and its role in our culture and civilization. Not available for Arts College credit. (Prereq 1 year elementary algebra and 1 year high school geometry or  $\$$ .)

Winter Qtr Sec 1 W—6:30-9, Arch 35

**Math 1006 FOUNDATIONS OF ARITHMETIC.** 3 degree credits, \$46.50.

Includes topics from the following: definitions of rational and irrational numbers, definitions of addition, subtraction, multiplication and division of fractions; methods of operations on rational and real numbers; the real number line and inequalities, topics from geometry and congruences. (Prereq 1005)

Spring Qtr Sec 1 W—6:30-9, Arch 35

**Math 1008 TRIGONOMETRY.** 3 degree credits, \$1201. \$46.50.

Analytic trigonometry emphasizing identities, equations, and properties of the functions; right and oblique triangles without logarithmic computation. (Prereq plane geometry; Math 0009 or high school higher algebra or  $\$$ .)

Fall Sem Sec 1 M—5:30-7, KoltH S133  
Sec 2 T—8:15-9:55, KoltH S133  
Sec 3 W—6:20-8, KoltH S133

Spring Sem Sec 4 T—6:20-8, KoltH S133

**Math 1111 COLLEGE ALGEBRA AND ANALYTIC GEOMETRY.** 5 degree credits, \$1201. \$77.50. (IS)

Functions and graphs, quadratic equations, progressions, inequalities, complex numbers, theory of equations, permutations and combinations, probability, systems of equations, determinants, graphing of linear and quadratic equations, conics in standard position, logarithms. (For students in social sciences, behavioral sciences, prebusiness administration, and others who require only some analytic geometry and college algebra without trigonometry. Students who plan to take several quarters of mathematics should not take this course. Prereq high school higher algebra in the last two years or 0009).

Fall Sem Sec 1 MW—5:45-7:10, VH 311  
Sec 2 MW—6:30-7:55, Kellogg HS 229, Little Canada  
Sec 3 TTh—6:20-7:45, VH 209  
Sec 4 Sa—9 a.m.-11:50, VH 16  
Spring Sem Sec 5 MW—6:20-7:45, VH 209  
Sec 6 TTh—6-7:25, Arch 10

**Math 1131 FINITE MATHEMATICS.** 5 degree credits, \$1111, 1201. \$77.50.

(For students in the social sciences, behavioral sciences, and prebusiness administration) Elementary computer programming, logical analysis, probability and stochastic models, Markov chains, linear systems and programming, matrix operations and applications. (Prereq high school higher algebra and mathematics placement score or Math 0009).

Fall Sem Sec 1 TTh—6-7:25, VH 16

**Math 1142 INTRODUCTION TO CALCULUS OF ONE AND SEVERAL VARIABLES.** 5 degree credits, \$1211. \$77.50. (IS)

(A second course of a 2-semester sequence for students in prebusiness administration curriculum and for other students requiring college algebra and a minimal amount of calculus. Students who plan to take several quarters of calculus should not register for this course.) Limits, derivatives, and integrals, some calculus of several variables and differential equations, rates of change, maxima and minima, several applications to a variety of disciplines. (Prereq 1111 or 1131).

Fall Sem Sec 1 MW—6:20-7:45, VH 16  
Spring Sem Sec 2 MW—5:45-7:10, KoltH S134  
Sec 3 MW—6:30-7:55, Kellogg HS 229, Little Canada  
Sec 4 TTh—6:20-7:45, Arch 55  
★Sec 5 Sa—9 a.m.-11:50, VH 301 (Limit 35 students)

Symbols, abbreviations, off-campus class locations begin on page 401.

**Math 1201 PRE-CALCULUS.** 5 degree credits, \$1111, 1131, 1141. \$77.50.

Inequalities, analytical geometry, complex numbers, binomial theorem, mathematical induction, functions and graphs, and trigonometric, exponential and logarithmic functions. (Prereq 0009 or high school higher algebra, 1008 or high school trigonometry. For students in both I of T and CLA who intend to take a calculus sequence.)

<b>Fall Qtr</b>	Sec 1	<b>MW</b> —6-8:05, Arch 50
	★Sec 2	<b>TTh</b> —6:30-8:35, Kellogg HS 233, Little Canada (Limit 30 students)
	★Sec 3	<b>TTh</b> —6:30-8:35, Richfield HS 144 (Limit 30 students)
<b>Fall Sem</b>	Sec 4	<b>TTh</b> —6-7:25, KoltH S136
<b>Winter Qtr</b>	Sec 5	<b>MW</b> —5:30-7:35, Arch 50
	★Sec 6	<b>TTh</b> —7-9:05, Sandburg JHS 211, Golden Valley (Limit 35 students)
<b>Spring Sem</b>	Sec 7	<b>MW</b> —6:20-7:45, KoltH S136
<b>Spring Qtr</b>	Sec 8	<b>MW</b> —6-8:05, VH 16
	Sec 9	<b>TTh</b> —6-8:05, Arch 40

**Math 1211 ANALYSIS I.** 5 degree credits, \$1142, 1311. \$77.50. (IS)

Analytical geometry and calculus of functions of one variable, applications, infinite series and sequences. (Prereq 1201 with grade of C or better, or 0009 and 1008 with grade of B or better, or 4 years of high school mathematics including trigonometry within the last two years. See note page xx)

<b>Fall Qtr</b>	★Sec 1	<b>MW</b> —6:30-8:35, Richfield HS 242 (Limit 30 students)
<b>Fall Sem</b>	Sec 2	<b>MW</b> —6:20-7:45, VH 2
	Sec 3	<b>TTh</b> —6-7:25, VH 20
<b>Winter Qtr</b>	Sec 4	<b>MW</b> —6-8:05, Arch 55
	Sec 5	<b>TTh</b> —6:30-8:35, Kellogg HS 229, Little Canada
	★Sec 6	<b>TTh</b> —6:30-8:35, Richfield HS 143 (Limit 30 students)
<b>Spring Sem</b>	Sec 7	<b>TTh</b> —6-7:25, VH 20
<b>Spring Qtr</b>	★Sec 8	<b>TTh</b> —7-9:05, Sandburg JHS 211, Golden Valley (Limit 35 students)

**Math 1221 ANALYSIS II.** 5 degree credits, \$1321, 1421. \$77.50. (IS)

A continuation of the course described under 1211. (Prereq grade of C or better in 1211 or equiv)

<b>Fall Qtr</b>	Sec 1	<b>MW</b> —6:30-8:35, Sandburg JHS 210, Golden Valley
	Sec 2	<b>TTh</b> —6-8:05, Arch 10
<b>Winter Qtr</b>	★Sec 3	<b>MW</b> —6:30-8:35, Richfield HS 144 (Limit 30 students)
<b>Spring Sem</b>	Sec 4	<b>MW</b> —6:20-7:45, VH 20
<b>Spring Qtr</b>	Sec 5	<b>MW</b> —6-8:05, Arch 40
	Sec 6	<b>TTh</b> —6:30-8:35, Kellogg HS 233, Little Canada
	★Sec 7	<b>TTh</b> —6:30-8:35, Richfield HS 341 (Limit 30 students)

**Math 1231 ANALYSIS III.** 5 degree credits, \$1331. \$77.50. (IS)

A continuation of the course described under 1211. (Prereq grade of C or better in 1221 or equiv)

<b>Fall Qtr</b>	Sec 1	<b>MW</b> —6-8:05, VH 211
<b>Fall Sem</b>	Sec 2	<b>TTh</b> —6:20-7:45, VH 113
<b>Winter Qtr</b>	Sec 3	<b>TTh</b> —6-8:05, VH 211
<b>Spring Qtr</b>	★Sec 4	<b>MW</b> —6:30-8:35, Richfield HS 145 (Limit 30 students)

**Math 3091 ELEMENTARY PROBABILITY AND STATISTICS WITH APPLICATIONS.** 4 degree credits, \$62.

Elementary probability and probability distributions, sampling and elements of statistical inference. *More mathematical treatment than Stat 1051.* (Prereq differential and integral calculus).

<b>Fall Sem</b>	Sec 1	<b>Th</b> —6-8:15, VH 207
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Symbols, abbreviations, off-campus class locations begin on page 401.

**Math 3211 ANALYSIS IV.** 5 degree credits, §3411, 3521, 3611. \$77.50. (IS)

Partial differentiation, chain rule, implicit functions, applications. Multiple integrals in two and three dimensions. (Prereq grade of C or better in 1231 or equiv)

Winter Qtr Sec 1 MW—6-8:05, VH 211

Spring Qtr Sec 2 TTh—6-8:05, VH 211

**Math 3221 INTRODUCTION TO LINEAR ALGEBRA AND LINEAR DIFFERENTIAL EQUATIONS.** 5 degree credits, §3142, 3511. \$77.50. (IS)

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 grade of C or better in 1231 or equiv)

Fall Qtr Sec 1 TTh—6-8:05, VH 313

Winter Qtr Sec 2 MW—6-8:05, VH 364

Spring Qtr Sec 3 MW—6-8:05, VH 211

**Math 3231 VECTOR ANALYSIS.** 4 degree credits, §1260, 5601-5602. \$62.

Scalar and vector products, derivatives, geometry of space curves, del operator, line and surface integrals, divergence and Stokes' theorem, transformation of coordinates, dyadics, applications. Mostly a technique course, intended mainly for students whose interests are not theoretical, but who wish to learn the relevant mathematical facts and methods. (Prereq grade of C or better in 3211 or equivalent).

Fall Sem Sec 1 M—6-8:15, VH 301

Spring Sem Sec 2 T—6-8:15, VH 301

**Math 5005-5006 TOPICS IN THE MATHEMATICS OF PRIMARY SCHOOLS.** 4 degree credits each quarter, \$68 each quarter.

This course is intended to provide a broad survey of mathematical topics for primary teachers who are interested in mathematics. (Prereq 1005 or 1006 with grades of B or better, or § for 5005; 5005 for 5006. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr 5005 Sec 1 Th—4:30-7, KoltH S133

Winter Qtr 5006 Sec 2 Th—4:30-7, KoltH S133

(See also Education)

**Math 5090 CALCULUS REFRESHER.** 5 degree credits, \$85.

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 anyone who wishes to take some advanced math courses. This course will cover the topics of a standard calculus course: differentiation of elementary functions, differentials, the definite integral, techniques of integration, applications of integration, polar coordinates, infinite series, approximation, partial differentiation, and multiple integrals. (Prereq 1 year calculus. May be taken S-N. Qualified students may register for graduate credit at the University of Minnesota, except in the major field)

Fall Sem Sec 1 MW—6:20-7:45, Aero 209

Spring Sem Sec 2 TTh—6-7:25, Arch 50

**Math 5242-5243 MATRIX THEORY WITH APPLICATIONS.** 4 degree credits each quarter, §5211, 5283-5284. \$68 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. (Prereq 3221 or 3141. Qualified students may register for graduate credit at the University of Minnesota.)

Fall Qtr 5242 Sec 1 W—6-8:30, VH 207

Winter Qtr 5243 Sec 2 W—6-8:30, VH 207

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# mechanical engineering (ME)

Your attention is called to the Undergraduate Development Certificate in Mechanical Engineering—90 credits, see page 399 and Professional Development Recognition Program in Engineering and Science, page 127.

Students interested in a degree in Mechanical Engineering, see page 368.

*Arthur G. Erdman, Associate Professor of Mechanical Engineering*  
*Darrell A. Frohrib, Professor of Mechanical Engineering*  
*William A. Kleinhenz, Associate Professor of Mechanical Engineering*  
*Thomas E. Murphy, Professor of Mechanical Engineering*  
*Katsuhiko Ogata, Professor of Mechanical Engineering*  
*Ephraim M. Sparrow, Professor of Mechanical Engineering*

Through registration in Extension Classes, students may earn all but approximately 12-16 credits towards a Bachelor's degree in mechanical engineering. The degree may then be completed after a limited amount of day school attendance or through University-Industry Television for Education (UNITE) (See chart on page 368).

## **ME 0024C-0025C MACHINE DESIGN I-II.** 5 certificate credits each semester, \$77.50 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, MechE 302

**Spring Sem 0025C** Sec 2 Th—6-9, MechE 302

## **ME 3201 MECHANICAL ENGINEERING SYSTEMS ANALYSIS.** 4 degree credits, \$AEM 3401. \$62.

Determination of response of engineering systems utilizing transfer function representation. Analogies between engineering systems based upon transfer function equivalence. (Prereq Math 3221 or §)

**Fall Qtr** Sec 1 Th—6-9:20, MechE 321

## **ME 3203 ANALYSIS OF MECHANISM SYSTEMS.** 4 degree credits, \$62.

Diagnostics of the performance of mechanism systems involving linkage, hydraulic, pneumatic, and electro-mechanical components. Energy balance techniques used to describe energy flow through machine systems. Preparation should include basic dynamics. (Prereq AEM 3036 or §)

**Winter Qtr** Sec 1 Th—6-9:20, MechE 321

## **ME 3301 THERMODYNAMICS.** 4 degree credits, \$62.

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 §)

**Fall Sem** Sec 1 T—6-8:30, MechE 102

## **ME 3701-3702 BASIC MEASUREMENTS LABORATORY I AND II.** 2 degree credits each quarter, \$31 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,

Symbols, abbreviations, off-campus class locations begin on page 401.



stress-strain, and radioactivity. Courses meet concurrently. (Prereq 3301, or 13301 for 3701; 3701 for 3702. 1 lect and 3 lab hrs per wk)

**Fall Qtr** 3701 Sec 1 W—6-9, MechE 370

3702 Sec 2 W—6-9, MechE 370

**Spring Qtr** 3701 Sec 3 W—6-9, MechE 370

3702 Sec 4 W—6-9, MechE 370

**ME 3900 INTRODUCTION TO ENGINEERING STATISTICS.** 4 degree credits, \$62.

Elements of probability, descriptive statistics, binomial and Poisson distributions; normal distribution, estimation, hypothesis testing, regression analysis and analysis of variance. (Prereq Math 1231 or equiv)

**Fall Sem** Sec 1 T—6-8:30, MechE 114

**ME 5342 HEAT TRANSFER.** 4 degree credits, \$68.

Steady and unsteady conduction of heat; Convection heat transfer in boundary layer and duct flows; forced and free convection; condensation and boiling; heat exchangers. Heat transfer by thermal radiation; radiative properties of black bodies and real surfaces. (Prereq 3301 or  $\equiv$ . 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, \$68.

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 3301 or equiv. Qualified students interested in graduate credit should inquire at time of registration)

**Spring Qtr** Sec 1 M—6-9:20, MechE 321

**ME 5209 FRICTION AND LUBRICATION.** 3 or 4 degree credits (1 credit term paper optional), \$51 or \$68.

Solid friction mechanism and boundary lubrication. Hydrodynamic and hydrostatic lubrication theory applied to bearing design. Introduction to gas bearings. (Prereq CE 3400 or equiv. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 Th—6-8:30, MechE 180

**ME 5480 INTERNAL COMBUSTION ENGINES.** 3, 4 or 5 degree credits (1 or 2 credit term paper optional), \$51, \$68, or \$85.

Principles of power production, fuel consumption, and emissions of gasoline and diesel engines; fuel-air cycle analysis, combustion flames, knock phenomena, air flow and volumetric efficiency, mixture requirements, ignition requirements and performance. (Prereq 3303 or equiv. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 T—6-8:30, MechE 321

new

new

## medicine

For information on non-credit conferences or workshops in medicine, please contact Office of Continuing Medical Education, 1350 Mayo Memorial Hospital; telephone 373-8012.

## metallurgical engineering (MetE)

Your attention is called to the Professional Development Recognition Program in Engineering and Science, page 127; Fundamentals of Engineering Review, I of T 0001, page 205.

*Louis E. Toth, Professor of Materials Science and Chemical Engineering*

Symbols, abbreviations, off-campus class locations begin on page 401.

**MetE 0001C PHYSICAL METALLURGY.** 3 certificate credits, \$46.50.

The structure and properties of metals and alloys. Heat treatment of steels. Important non-ferrous alloys. Corrosion resistance; failures at low temperatures and under repeated stresses. (No prereq but high school chemistry and high school physics are strongly desirable)

**Fall Qtr** Sec 1 **W**—6:20-8:50, MinMet 124, Toth

**MetE 0002C PHYSICAL METALLURGY.** 3 certificate credits, \$46.50.

Alloy steels, hardenability and weldability, alloys for high temperatures, theory of hardening processes, non-ferrous alloys, plastics, ceramics. (Prereq 0001C or 1. May be offered alternate years)

**Spring Qtr** Sec 1 **W**—6:20-8:50, MinMet 116, Toth

## microbiology (MicB)

*Russell Bey, Instructor of Microbiology*

**\*MicB 3103 GENERAL MICROBIOLOGY.** 5 degree credits, \$77.50 plus \$14 course fee. Total \$91.50.

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 1. Microscope required. [Inquire at first class meeting about rental]. Limited to 35 students)

**Winter Qtr** Sec 1 **Lect MW**—6:15-7:45, HSUnitA 2-580

**Lab MW**—7:45-10:00, HSUnitA 2-522, Bey

## near and middle eastern studies

(See also History; and ethic studies courses, page 300)

Cassette tapes are available to extension classes students on a take-home basis. Students can pick up tapes at the Learning Resources Center on the second floor of Walter Library or the second floor of Temporary South of Coffey on the St. Paul Campus. Students must present a fee statement when checking out tapes. Rental costs are covered by the special fees paid with tuition.

Learning Resource Center hours are: 8 a.m.-10 p.m., Monday-Thursday; 8 a.m.-6 p.m., Friday; 9 a.m.-6 p.m., Saturday; Sunday hours being planned.

## middle eastern and islamic studies (MidE)

*Iraj Bashiri, Assistant Professor of Iranian Studies*

*Anwar Chejne, Professor of Arabic Studies*

*Caesar Farah, Professor of Arabic Studies*

The following non-language courses may be applied toward the CLA foreign language requirement, Route II for Arabic [see page 359]: MidE 3525, 5525.

## arabic (Arab) persian (Per)

**Arab 1101-1102 BEGINNING ARABIC.** 5 degree credits each semester, \$77.50 plus \$3 course fee. Total \$80.50 each semester.

Vocabulary, forms and syntax; intensive graded reading and speaking facility. (No prereq for 1101; 1101 or 1102 for 1102)

**Fall Sem 1101** Sec 1 **M**—6:20-9:05, FolH 208, Chejne

**Spring Sem 1102** Sec 2 **M**—6:20-9:05, FolH 208, Chejne

Symbols, abbreviations, off-campus class locations begin on page 401.

**MidE 3525 THE MODERN ARAB WORLD: 1915 TO PRESENT.** 4 degree credits, \$5525. \$62.

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; role in international affairs. (No prereq. Meets concurrently with 5525. May be applied toward the CLA foreign language requirement, Route II [see page 359])

**Fall Qtr** Sec 1 **W**—6:20-8:50, FolH 201

**MidE 5525 THE MODERN ARAB WORLD: 1915 TO PRESENT.** 4 degree credits, \$3525. \$68.

See description for 3525. (No prereq. Meets concurrently with 3525. May be applied toward the CLA foreign language requirement, Route II [see page 359]. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 **W**—6:20-8:50, FolH 201

**Per 1101-1102 BEGINNING PERSIAN.** 5 degree credits each semester. \$77.50 each semester.

**new**

Audiolingual course in spoken and written modern Persian. (No prereq for 1101; 1101 for 1102)

**Fall Sem 1101** Sec 1 **Th**—6:20-9:05, KlAc1 101, Bashiri

**Spring Sem 1102** Sec 2 **Th**—6:20-9:05, KlAc1 101, Bashiri

## ancient near eastern and jewish studies (ANEJ) hebrew (Hebr)

### jewish studies (JwSt)

(See also Hist 3200, Jews in the Modern World; Pol 5457, Politics and Government in Israel)

*Jonathan Paradise, Assistant Professor*

*Daniel Reisman, Associate Professor*

*Tzvee Zahavy, Assistant Professor*

The following non-language classes may be applied toward the CLA foreign language requirement, Route II (see page 359): Hist 3051, 3052, 3053; JwSt 3126, 3142; ANEJ 1501, 1502, 1503, 1504, 3501, 3502, 3503, 3504.

**IC 0018 JEWISH MYSTICISM.** No credit. Brin.

**IC 0031 ART AND ARCHITECTURE OF THE JEWISH PEOPLE.** No credit. Chiat.

(See Informal Courses, page 196).

**Hebr 1104-1105 INTRODUCTION TO BIBLICAL HEBREW.** 5 degree credits, \$77.50.

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. A joint Day/Extension class)

**Fall Qtr 1104** Sec 1 **Th**—5:30-8:30, FolH 107

**Winter Qtr 1105** Sec 2 **Th**—5:30-8:30, FolH 107

**ANEJ 1501, 1502, 1503 ANCIENT ISRAEL: THE BACKGROUND OF THE BIBLE.** 4 degree credits each quarter, \$3501, 3502, 3503, Hist 3501, 3502, 3503. \$62 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.

Symbols, abbreviations, off-campus class locations begin on page 401.

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 359] for Hebrew. Meets concurrently with ANEJ 3501, 3502, 3503, and Hist 3501, 3502, 3503)

**Fall Qtr 1501 Sec 1 W—6:20-8:50, FolH 209, Reisman**  
**Winter Qtr 1502 Sec 2 W—6:20-8:50, FolH 104, Paradise**  
**Spring Qtr 1503 Sec 3 W—6:20-8:50, FolH 209, Paradise**

**ANEJ 1504 PAGAN MYTHS AND THE BIBLE.** 4 degree credits, \$62. (◆\$31)

Examines the Bible in its Ancient Near Eastern historical context. Through lectures and discussions, attention will be focused on the early chapters of Genesis dealing with pre-Israelite history, and on Mesopotamian mythologies offering parallels. Among the subjects are: the Creation, the Garden of Eden, Cain and Abel, the Flood and the Tower of Babel. Readings will consist primarily of relevant portions of Genesis in translation, and parallel pagan myths. Meets concurrently with 3504. (No prereq. May be applied toward the CLA foreign language requirement, Route II, for Hebrew [see page 359])

**Spring Qtr Sec 1 T—7-9:30, Jewish Community Center,  
St. Louis Park; Reisman**

**JwSt 3126 THEMES IN MODERN JEWISH THOUGHT.** 4 degree credits, \$62. (◆\$31)

Through lectures, discussion and readings the course explores the underpinnings of current theological and philosophical issues. Topics include Jewish Identity since political emancipations, political and Spiritual Zionism, Hasidism, Reform, Conservatism, Neo-orthodoxy, Reconstructionism and others. (No prereq. May be applied toward the CLA foreign language requirement, Route II, for Hebrew [see page 359])

**Winter Qtr Sec 1 T—6:20-8:50, FolH 107, Zahavy**

**JwSt 3142 THEMES IN MEDIEVAL JEWISH THOUGHT.** 4 degree credits, \$62.

Major Jewish philosophers, including Saadia Gaon, Yehudah Halevi, and Maimonides. Topics such as faith and reason, proofs of God, creation, good and evil, Jewish peoplehood, particularism and universalism. (No prereq. May be applied toward the CLA foreign language requirement, Route II for Hebrew [see page 359].)

**Fall Qtr Sec 1 M—7-9:30, StP Talmud Torah, Zahavy**

**ANEJ 3501, 3502, 3503 ANCIENT ISRAEL: THE BACKGROUND OF THE BIBLE.** 4 degree credits each quarter, \$1501, 1502, Hist 3501, 3502, 3503. \$62 each quarter.

See course description for MidE 1501, 1502. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 359]. Meets concurrently with ANEJ 1501, 1502, 1503 and Hist 3501, 3502, 3503. Arrangements for Upper Division credit should be made with instructor)

**Fall Qtr 3501 Sec 1 W—6:20-8:50, FolH 209, Reisman**  
**Winter Qtr 3502 Sec 2 W—6:20-8:50, FolH 104, Paradise**  
**Spring Qtr 3503 Sec 3 W—6:20-8:50, FolH 209, Paradise**

**ANEJ 3504 PAGAN MYTHS AND THE BIBLE.** 4 degree credits, \$62.

See description for 1504. Meets concurrently with 1504. (No prereq. May be applied toward the CLA foreign language requirement, Route II, for Hebrew [see page 359])

**Spring Qtr Sec 1 T—7-9:30, Jewish Community Center, St Louis Park**

## minnesota

(See courses on page 313)

Symbols, abbreviations, off-campus class locations begin on page 401.

## music (Mus)

(See also music courses in General College; Afro-American Studies; Physics; and WoSt 3502, Women and the Arts)

*Maury Bernstein, Lecturer in Music*  
*Dwayne Jorgenson, Associate Professor of Music*  
*Thomas Lancaster, Associate Professor of Music*  
*Adrian Lauritzen, Associate Professor of Music*  
*Richard Massmann, Professor of Music*  
*Gwen Perun, Assistant Professor of Music*  
*Johannes Riedel, Professor of Music*  
*Roy A. Schuessler, Professor of Music*  
*Everett Sutton, Associate Professor of Music*  
*Edgar Turrentine, Professor of Music Education*

### 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, \$31 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)

<b>Fall Sem</b>	<b>0051C</b> Sec 1	<b>M</b> —6:15-7:30, MusEd 103, Lauritzen
	<b>0052C</b> Sec 2	<b>M</b> —7:30-8:45, MusEd 103, Lauritzen
<b>Spring Sem</b>	<b>0051C</b> Sec 3	<b>M</b> —6:15-7:30, MusEd 103, Lauritzen
	<b>0052C</b> Sec 4	<b>M</b> —7:30-8:45, MusEd 103, Lauritzen

★**Mus 1171-1172-1173 GUITAR: CLASS LESSONS.** 2 degree credits each quarter, \$31 each quarter.

Fundamentals for the beginning folk-guitarist. Progressive development of skills; **1171**: basic strumming techniques, harmonizations in basic keys; **1172**: advanced strumming techniques, bass runs, finger-picking strums; **1173**: melodic techniques, advanced harmonizations. (Student must furnish own guitar.) (No prereq for 1171; 1171 for 1172; 1172 for 1173. Limited to 20 students)

<b>Fall Qtr</b>	<b>1171</b>	Sec 1	<b>M</b> —6:20-8:20, ScH 103	
		Sec 2	<b>T</b> —6:20-8:20, ScH 103	
<b>Winter Qtr</b>	<b>1172</b>	Sec 3	<b>W</b> —6:20-8:20, ScH 103	
		Sec 4	<b>T</b> —6:20-8:20, ScH 103	
			<b>W</b> —6:20-8:20, ScH 103	
<b>Spring Qtr</b>	<b>1172</b>	Sec 6	<b>M</b> —6:20-8:20, ScH 103	
		<b>1171</b>	Sec 7	<b>W</b> —6:20-8:20, ScH 103
			Sec 8	<b>T</b> —6:20-8:20, ScH 103
	<b>1173</b>	Sec 9	<b>M</b> —6:20-8:20, ScH 103.	

## group performance

Students must audition for all of the group performance music classes. Auditioning should be arranged with the instructor in advance of the class opening.

**Mus 1410 BAND.** 1 degree credit, \$15.50.

Rehearsals and appearances cover standard band literature; several appearances each quarter. (Prereq ♯. Class meets 2, 3 or 4 days a week by arrangement. Students are advised to arrange auditions and class meeting days with Professor Benrciscutto, telephone 373-3431, prior to registration)

Symbols, abbreviations, off-campus class locations begin on page 401.

<b>Fall Qtr</b>	Sec 1	<b>Days arr. 3:15-5:05, NMA 4</b>
<b>Winter Qtr</b>	Sec 2	<b>Days arr. 3:15-5:05, NMA 4</b>
<b>Spring Qtr</b>	Sec 3	<b>Days arr. 3:15-5:05, NMA 4</b>

**Mus 1420 ORCHESTRA.** 1 degree credit, \$15.50.

Standard orchestral literature performed. Open to players of orchestral instruments from Twin Cities. Those enrolled with consent of chairman of Music Department are given the opportunity of rehearsing with the University Symphony and participating in a concert given in Northrop Auditorium. (Prereq #)

<b>Fall Qtr</b>	Sec 1	<b>MTTh—3:15-5:00, WuH 320, Massmann</b>
<b>Winter Qtr</b>	Sec 2	<b>MTTh—3:15-5:00, WuH 320, Massmann</b>
<b>Spring Qtr</b>	Sec 3	<b>MTTh—3:15-5:00, WuH 320, Massmann</b>

**Mus 1430 UNIVERSITY CHORUS.** 1 degree credit, \$15.50.

Performances of major symphonic-choral works with the Minnesota Orchestra, University Symphony Orchestra, and University Concert Band. (Prereq #. Extension students may choose whether or not to attend one of the MWF daytime sections, but must attend the evening section)

<b>Fall Qtr</b>	Sec 1	<b>MWF—11:15-12:05, NMA 4, Jorgenson</b>
	Sec 2	<b>MWF—1:15-2:05, NMA 4, Jorgenson</b>
	Sec 3	<b>T—7-9:30, SciCB 325, Jorgenson</b>
<b>Winter Qtr</b>	Sec 4	<b>MWF—11:15-12:05, NMA 4, Jorgenson</b>
	Sec 5	<b>MWF—1:15-2:05, NMA 4, Jorgenson</b>
	Sec 6	<b>T—7-9:30, SciCB 325, Jorgenson</b>
<b>Spring Qtr</b>	Sec 7	<b>MWF—11:15-12:05, NMA 4, Jorgenson</b>
	Sec 8	<b>MWF—1:15-2:05, NMA 4, Jorgenson</b>
	Sec 9	<b>T—7-9:30, SciCB 325, Jorgenson</b>

**Mus 1430 MEN'S CHORUS.** 1 degree credit, \$15.50.

Rehearsals and performances cover standard men's glee club material as well as special arrangements. Group appears for on- and off-campus functions. (Prereq #)

<b>Fall Qtr</b>	Sec 10	<b>MWF—12:15-1:05, NMA 4, Jorgenson</b>
<b>Winter Qtr</b>	Sec 11	<b>MWF—12:15-1:05, NMA 4, Jorgenson</b>
<b>Spring Qtr</b>	Sec 12	<b>MWF—12:15-1:05, NMA 4, Jorgenson</b>

**Mus 1430 ST. PAUL CAMPUS CHORUS.** 1 degree credit, \$15.50.

Prepares for at least one public appearance each quarter as well as for special events connected with the St. Paul Campus. (Prereq #)

<b>Fall Qtr</b>	Sec 13	<b>TTh—4:30-6:00, AlderH 310</b>
<b>Winter Qtr</b>	Sec 14	<b>TTh—4:30-6:00, AlderH 310</b>
<b>Spring Qtr</b>	Sec 15	<b>TTh—4:30-6:00, AlderH 310</b>

**Mus 5490 CHAMBER SINGERS.** 2 degree credits, \$34.

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)

<b>Fall Qtr</b>	Sec 1	<b>MWF—4:15-5:30, WuH 7A, Lancaster</b>
<b>Winter Qtr</b>	Sec 2	<b>MWF—4:15-5:30, WuH 7A, Lancaster</b>

## music theory, history, literature, pedagogy

**Mus 1001 FUNDAMENTALS OF MUSIC.** 4 degree credits, \$62.

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)

Symbols, abbreviations, off-campus class locations begin on page 401.

<b>Fall Qtr</b>	Sec 1	T—6-9:20, MusEd 103, Lauritzen
<b>Winter Qtr</b>	Sec 2	T—6-9:20, MusEd 103, Lauritzen
<b>Spring Qtr</b>	Sec 3	T—6-9:20, MusEd 103, Lauritzen

**Mus 1014 INTRODUCTION TO MUSIC.** 4 degree credits, \$62. (◆\$31)

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)

<b>Winter Qtr</b>	Sec 1	M—6:10-9:30, ScH 3, Turrentine
<b>Spring Qtr</b>	Sec 2	M—6:10-9:30, ScH 3, Turrentine

**Mus 1501-1502-1503 MATERIALS AND STRUCTURE OF MUSIC I.** 2 degree credits each quarter, \$31 each quarter. (◆\$15.50) (IS 1501)

**1501:** Clefs, transposition, modes, meter and rhythm, triads, part writing, cadences, dominant seventh chord. **1502:** Nonchord tones, modulation, secondary dominants, design and elaboration of harmonic progressions. **1503:** Diatonic seventh, secondary diminished seventh, augmented sixth and Neapolitan chords, variation and ternary forms. (No prereq for 1501; 1501 for 1502; 1502 for 1503. Students with very limited musical experience may be interested in Mus 1001, a more elementary course in music)

<b>Fall Qtr</b>	<b>1501</b>	Sec 1	T—6:20-8:30, ScH 4
<b>Winter Qtr</b>	<b>1502</b>	Sec 2	T—6:20-8:30, ScH 4
<b>Spring Qtr</b>	<b>1503</b>	Sec 3	T—6:20-8:30, ScH 4

**Mus 1511-1512-1513 EAR TRAINING AND SIGHT-SINGING I.** 2 degree credits each quarter, \$31 each quarter. (IS 1511)

Melodic, harmonic, and rhythmic dictation; sight-singing; clef-reading; musicianship drills. (No prereq for 1511; 1511 for 1512; 1512 for 1513. Concurrent registration with Mus 1501-1502-1503 recommended)

<b>Fall Qtr</b>	<b>1511</b>	Sec 1	Th—6:20-8:30, ScH 4
<b>Winter Qtr</b>	<b>1512</b>	Sec 2	Th—6:20-8:30, ScH 4
<b>Spring Qtr</b>	<b>1513</b>	Sec 3	Th—6:20-8:30, ScH 4

**Mus 1801, 1802, 1803 AMERICAN FOLK MUSIC.** 3 degree credits each quarter, \$46.50 each quarter. (◆\$23.25 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 South 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)

<b>Fall Qtr</b>	<b>1801</b>	Sec 1	W—6:20-8:50, WuH 320, Bernstein
<b>Winter Qtr</b>	<b>1802</b>	Sec 2	W—6:20-8:50, WuH 320, Bernstein
<b>Spring Qtr</b>	<b>1803</b>	Sec 3	W—6:20-8:50, WuH 320, Bernstein

**Mus 3021 INTRODUCTION TO MUSIC.** 5 degree credits, \$77.50. (◆\$38.75)

Introduction to music in the repertory of our culture, exploring selected forms and styles from the 17th through 20th centuries. Aural analyses, relationships of large units of musical form. (No prereq)

<b>Fall Qtr</b>	Sec 1	W—6:10-9:30, ScH 4, Sutton
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**Mus 3584 MUSIC: ITS MEANING AND STRUCTURE.** 4 degree credits, \$62. (◆\$31)

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)

<b>Fall Qtr</b>	Sec 1	W—6:10-9:30, ScH 3, Fetler
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Symbols, abbreviations, off-campus class locations begin on page 401.

★Mus 5051-5052-5053 **GROUP PIANO PEDAGOGY.** 3 degree credits each quarter, \$51 plus \$12.80 special fee. Total \$63.80 each quarter.

Observation, discussion, research and supervised teaching in group piano. Emphasis on conceptual learning through discovery. Focus on early and intermediate levels of instruction. (Prereq 12 credits in applied piano or equiv for 5051; 5051 for 5052; 5052 for 5053. Limited to 20 students. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr 5051 Sec 1 W—10 a.m.-12, MacP 221, Perun

Winter Qtr 5052 Sec 2 W—10 a.m.-12, MacP 221, Perun

Spring Qtr 5053 Sec 3 W—10 a.m.-12, MacP 221, Perun

Mus 5361-5362-5363 **VIOLIN PEDAGOGY I.** 2 degree credits each quarter, \$34 each quarter.

Teaching private violin students at beginning, intermediate, and advanced levels. Discussion and demonstration of pedagogical techniques. (Prereq 12 cr in violin or viola or 1 for 5361; 5361 for 5362; 5362 for 5363. A joint Day/Extension class. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr 5361 Sec 1 W—4:15-6, 321½ SE 14 Ave; West, Tartaglia

Winter Qtr 5362 Sec 2 W—4:15-6, 321½ SE 14 Ave; West, Tartaglia

Spring Qtr 5363 Sec 3 W—4:15-6, 321½ SE 14 Ave; West, Tartaglia

★Mus 5377 **THE ADOLESCENT SINGING VOICE.** 3 degree credits. \$51.

Principles of voice in teaching adolescent singers. Directed teaching, required readings, and study of relevant repertoire. (Prereq one year of voice or equiv or 1. Limited to 30 students. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 M—6:20-8:50, MusEd 200, Schuessler

Mus 5704, 5705 **LATIN AMERICAN MUSIC.** 4 degree credits each quarter, \$68 each quarter. (♦\$34 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)

Winter Qtr 5704 Sec 1 Th—6:10-9:30, WuH 320, Riedel

Spring Qtr 5705 Sec 2 Th—6:10-9:30, WuH 320, Riedel

Mus 5711, 5712 **AMERICAN POPULAR MUSIC.** 4 degree credits each quarter. \$68 each quarter. (♦\$34) (IS 5711)

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 ). Students registered on any of the no-credit reduced tuition plans (see page ) 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)

Winter Qtr 5711 Sec 1 T—6:20-9:30, WuH 7A, Riedel

Spring Qtr 5712 Sec 2 T—6:20-9:30, WuH 7A, Riedel

Symbols, abbreviations, off-campus class locations begin on page 401.



### Piano Technician

A special course in piano tuning and repairing will be offered at MacPhail Center, the Fall Session beginning in September, the Winter Session beginning in January and the Spring Session beginning in May. (Call MacPhail Center for exact starting dates.) No credit will be given for the course. The fee of \$300.00 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)

(Department of Curriculum and Instruction)

*Joanna Cortright, Instructor in Music Education*

★**MuEd 5750 WORKSHOP: MUSIC EDUCATION.** 2 degree credits (maximum 12 cr) \$34.

Selected topics in music education. **Emphasis this offering: Music for early childhood.** Designed to meet the needs of nursery school teachers and others working in the area of early childhood education. A class with participants experiencing the activities and using the techniques of music—learning to take back to their classrooms. The course will be concerned with how to help children develop lasting musical concepts, methods and materials to use in the pre-school music lesson, and how other arts relate to music in a pre-school music lesson. **May not be taken S-N.** (No prereq. Spring quarter is repetition of fall quarter offering. Qualified students may register for graduate credit at the University of Minnesota) Limited to 25 students.

**Fall Qtr**      Sec 1    T—7-9, MacP, Cortright

**Spring Qtr**    Sec 2    T—7-9, MacP, Cortright

A wide variety of workshops in music education is available to local school districts who wish to jointly design a continuing education experience to meet unique local needs.

For further information in regard to planning an individually designed workshop for a particular district or building staff contact: Chairman, Department of Music Education, 104 Scott Hall, University of Minnesota, Minneapolis, Minnesota 55455; or telephone 373-3452.



## natural science and technology (NSci)

(See also General College natural science courses; and other environmental concerns courses, page 318)

*Lawrence E. Conroy, Associate Professor of Chemistry*

*William Franta, Assistant Professor of Computer, Information, and Control Sciences*

*Richard J. Goldstein, Professor of Mechanical Engineering*

*Robert F. Lambert, Professor of Electrical Engineering*

*Gary M. Schneider, Assistant Professor of Computer, Information, and Control Sciences*

*Kenneth T. Whitby, Professor of Mechanical Engineering*

**NSci 1005 PHYSICAL WORLD: CHEMISTRY.** 4 degree credits, \$ any other chemistry courses. \$62. (♦\$31)



Fundamental concepts of chemical bonding, structure of matter, and the forces operating in the physical world. Scientific methods and principles developed in lecture, lecture experiments, and laboratory to help students understand their environment and problems faced in improving it. (Prereq 1 year high school algebra; high school chemistry recommended)

**Spring Sem** Sec 1 TTh—6-7:40, SciCB 175, Conroy

**NSci 3201 PERSPECTIVES ON COMPUTERS AND SOCIETY.** 4 degree credits, \$62 plus \$4 special fee. Total \$66. (♦\$31 plus \$4 special fee. Total \$35)

The impact of computers on society. Partnership or confrontation. History of development. Potential for use. Computer utility. Privacy in a computer society. The future of computers. The ultimate machine. Computers in business, industry, art, music, the home. Meets concurrently with CSci 3001. (Prereq sophomore or §)

**Spring Qtr** Sec 1 W—6-8:30, LindH 203

**NSci 3301 ENERGY, POWER AND SOCIETY.** 4 degree credits, \$62. (♦\$31)

The need for energy and its use in society. Concepts of energy and power; problems of pollution and waste disposal. (Prereq high school physics or chemistry)

**Fall Qtr** Sec 1 M—6:20-8:50, Arch 5, Goldstein

## near and middle eastern studies

(see page 232)

## norwegian

(See Scandinavian Languages)

## nursing (Nurs)

(See also Phys 5094-5095, Human Physiology)

*Mary Jackel, Director, Critical Care Education Project*  
*Stella Jensen, Teaching Specialist*  
*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 license renewal and/or promotion opportunities.

The course numbers prefaced by a "3" or "5" indicate credits which may be applied toward the requirements of a bachelor of science in nursing. These credits are applicable toward the nursing degree only if the student enrolls in the School of Nursing within 3 years of the date of course completion.

Course numbers prefaced by an "8" indicate graduate credit and may be applied toward a master's degree in nursing.

There are also many general education courses offered in extension classes which may be taken for degree credit. Final decision as to the applicability of these credits toward a degree offered by the School of Nursing is the responsibility of the School's Admission Committee.

Registered nurses who wish to continue their studies toward a degree program in nursing are urged to contact the School of Nursing, 3313 Powell Hall (telephone 373-3462) and ask for an appointment.

**Nurs 0312C EMERGENCY CARE.** 14 certificate credits, \$100.

This course is designed to increase the knowledge and clinical competence of registered nurses who are currently working in rural and urban emergency-care settings. The emphasis will be directed toward providing clinical experience in metropolitan emergency-care and selected acute-care settings with classroom instruction by individuals with expertise in emergency care. Nurses in the program will also have an opportunity to identify specific learning needs and will be given assistance in meeting those needs on an individual basis. (Prereq RN)

Requests for registration information should be sent to Emergency Care Course, Extension Classes, 202 Westbrook Hall, University of Minnesota, Minneapolis MN. 55455.

<b>Spec Term</b>	<b>Sec 1</b>	<b>Oct. 4-29 (tentative)</b> (see fall quarter registration dates page 13. No late fee through Oct. 1)
	<b>Sec 2</b>	<b>Jan. 10-Feb. 4 (tentative)</b> (see winter quarter registration dates page 17. No late fee through Jan. 7)
	<b>Sec 3</b>	<b>Apr. 4-29 (tentative)</b> (see spring quarter registration dates page 21. No late fee through Apr. 1)

**★Nurs 5700 CRITICAL CARE NURSING.** 5 degree credits, see registration and tuition information below.

A Metropolitan Medical Center course offered through Extension Classes. Intended for the registered nurse, this course covers biophysical and psychological crises. Topics include circulation, respiration, metabolism, integration and control, stress, and threat appraisal. Methods of instruction will include group meetings, supervised clinical experiences, and individualized instruction. (Prereq RN and employment in hospital for past 6 months. Each section limited to 20 students. May not be taken for graduate credit.)

<b>Spec Term</b>	<b>Sec 1</b>	<b>Sept. 13-Oct. 14 MTh—8:30 a.m.-2:30 group meetings;</b> <b>TWF—open schedule to accommodate clinical</b> <b>experience, individualized instruction,</b> <b>work and family obligations</b> <b>(Registration and late-fee information follows.)</b>
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Symbols, abbreviations, off-campus class locations begin on page 401.

- Sec 2 **Jan. 24-Feb. 24** same time schedule as above  
**(Registration and late-fee information follows.)**
- Sec 3 **Apr. 11-May 12** same time schedule as above  
**(Registration and late-fee information follows.)**
- Sec 4 **June 13-July 28** same time schedule as above  
**(Registration late-fee information follows.)**

All sections held at Metropolitan Medical Center, Minneapolis

**Tuition:**

\$85 plus \$187.50 special fee. Tuition may be reduced if an application for support is approved. Information regarding arrangements for payment of tuition will be sent with registration materials.

**Registration:**

**By mail**, write to CRITICAL CARE, EXTENSION CLASSES, 202 WESBROOK HALL, U OF M, Minneapolis, MN 55455.

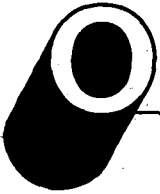
**In person** at the above address.

**Late registrations** received later than two weeks prior to the first day of the class will be charged \$10 late fee.

★Nurs 8021 **RESEARCH IN NURSING**. 3 degree credits, \$69.

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 any graduate level statistics course. 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



## obstetrics

(See Family Planning Administration)

## ojibwe and dakota

(See American Indian Studies)

## operations analysis and management (OAM)

*John C. Anderson, Assistant Professor of Operations Analysis and Management*  
*Thomas R. Hoffmann, Professor of Operations Analysis and Management*  
*Roger G. Schroeder, Associate Professor of Operations Analysis and Management*

Symbols, abbreviations, off-campus class locations begin on page 401.

**★OAM 3000 INTRODUCTION TO OPERATIONS MANAGEMENT.** 4 degree credits, \$62.

Concepts and principles related to the management of operating functions. Examples from service industries, nonprofit organizations, and manufacturing are utilized. Relationships to other business functions and the environment are stressed. The subject is taught from a managerial point of view. Topics include: an overview of operations, planning operating processes, productivity measurement, standards, allocation of resources, forecasting, concepts of quality, inventory management, principles of scheduling, and operational control information systems. (No prereq. Limited to 50 students.)

**Fall Qtr** Sec 1 **W**—5:30-8:50, BlegH 435, Schroeder

OAM 3055 Introduction to Management Sciences replaced by QA 3055.

**★OAM 5056 APPLICATIONS OF ANALYTICAL METHODS AND COMPUTERS IN OPERATIONS MANAGEMENT AND ANALYSIS.** 4 degree credits, \$68 plus \$4 special fee. Total \$72.

The application of forecasting methods, optimization techniques; simulation, product and project management methods; inventory models, quality control techniques and computer technology problems encountered in operations management. Specific laboratory sessions will include problem solving and case analysis. (Prereq 3000, OAM 3055 or QA 3055 or 8. Limited to 40 students. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 **W**—5:30-8:50, BlegH 440, Schroeder

## ophthalmology

(See page 384)

## pharmacognosy (Phcg)

(See also IC 0015, Current Issues in Nutrition: Fallacies and Facts)

*John Staba, Professor of Pharmacognosy*

**★Phcg 1800 NATURE'S REMEDIES.** 3 degree credits, \$46.50.

Evaluation of those substances obtained from nature that are medicinally used. Chemical and physiological terms defined. History and literature; vitamins and enzymes; drugs from animals (hormones); drugs from the sea and microorganisms (antibiotics and vaccines); spices and herbs; tranquilizing plants; stimulating and hallucinogenic plants; poisonous plants and mushrooms. (No prereq. Limited to 50 students)

**Spring Qtr** Sec 1 **T**—6:20-8:50, AH 150, Staba

## pharmacy

For information on non-credit conferences or workshops in pharmacy, please contact Thomas M. McKennell, Continuing Education in Pharmacy, 318 Harvard St. S.E., Minneapolis, Minnesota 55455 (376-5313).

Symbols, abbreviations, off-campus class locations begin on page 401.

# philosophy (Phil)

(See also Econ 5021, Economics, Ethics, and Economic Philosophy)

*Norman O. Dahl, Associate Professor of Philosophy*  
*John Dolan, Associate Professor of Philosophy*  
*Keith Gunderson, Professor of Philosophy*  
*William H. Hanson, Associate Professor of Philosophy*  
*James Hawthorne, Instructor in Philosophy*  
*Herbert Hochberg, Professor of Philosophy*  
*Jasper Hopkins, Professor of Philosophy*  
*H.E. Mason, Professor of Philosophy*  
*Grover Maxwell, Professor of Philosophy*  
*Michael McKenna, Instructor in Philosophy*  
*Mischa Penn, Assistant Professor in University College*  
*Rolf Sartorius, Professor of Philosophy*  
*C. Wade Savage, Associate Professor of Philosophy*  
*Burnham Terrell, Professor of Philosophy*  
*Lloyd Waithe, Instructor in Philosophy*  
*Candido Zanoni, Associate Professor (General College)*

## A MAJOR IN PHILOSOPHY CAN BE COMPLETED IN THE EVENING.

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

### B.A. Major Sequence

Required Preparatory Courses  
1001 or 3201; 1002

### Major Requirements

Minimum of 35 3xxx-5xxx-level cr, including: 3003 or 3003H and at least 5 additional cr in history of philosophy.

At least 15 cr at the 5xxx level

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

### Phil 1001 LOGIC. 5 degree credits, \$77.50. (♦\$38.75) (IS)

Special emphasis upon the application of formal techniques for evaluating arguments. (No prereq)

◆	Fall Qtr	Sec 1	T—6:20-8:50, ForH 115
		Sec 2	W—7-9:30, Richfield HS 144
	Winter Qtr	Sec 3	Sa—9:30 a.m.-12, ForH 115
	Spring Qtr	Sec 4	W—6:20-8:50, ForH 115

### Phil 1002 INTRODUCTION TO PHILOSOPHY. 5 degree credits, \$77.50. (♦\$38.75) (IS)

Introduction to permanent problems; principal methods and schools of philosophy; historical and contemporary views. (No prereq)

◆	Fall Qtr	Sec 1	Sa—9:30 a.m.-12, ForH 349
	Winter Qtr	★Sec 2	M—7-9:20, Minnetonka HS 120 (Limit 40 students)
	Spring Qtr	Sec 3	Th—6:20-8:50, ForH 349

### Phil 1003 ETHICS. 5 degree credits, \$77.50. (♦\$38.75)

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 285
	Winter Qtr	★Sec 2	T—7-9:30, St Stephens Church 208, WStP (Limit 45 students)
	Spring Qtr	Sec 3	Sa—9:30 a.m.-12, ForH 115

Symbols, abbreviations, off-campus class locations begin on page 401.

**Phil 1004 POLITICAL PHILOSOPHY.** 5 degree credits, \$77.50. (◆\$38.75)

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 349, Sartorius

**Phil 1011 SCIENCE AND RELIGION.** 5 degree credits, \$77.50. (◆\$38.75) (IS)

Inquiry into nature of science and religion as currently interpreted; attempt to find grounds of conflict and/or reconciliation. (No prereq)

**Fall Qtr** Sec 1 **M**—6:20-8:50, ForH 175

**Spring Qtr** ★Sec 2 **M**—7-9:30, Southwest HS 9, Mpls; Penn (Limit 60 students)

**Phil 1410 SELECTED TOPICS IN MORAL AND POLITICAL PHILOSOPHY: THE CONFLICT OF JUSTICE AND FREEDOM.** 5 degree credits, \$77.50. (◆\$38.75)

In this course we will consider some of the important and interesting political and ethical questions of life in the modern state. In particular we will focus upon such questions as: What is social justice? What are its demands? Why can't I act as I please so long as my actions do not harm others? What justifies the claim that some members of society must contribute to the welfare of others? What's my fair share of the American pie? (No prereq)

**Winter Qtr** Sec 1 **W**—6:20-8:50, ForH 175, McKenna

**Phil 3001 GENERAL HISTORY OF WESTERN PHILOSOPHY.** 5 degree credits, \$77.50 (◆\$38.75) (IS)

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 for Greek and Latin [see page 359])

**Fall Qtr** Sec 1 **W**—6:20-8:50, ForH 359, Dahl

**Phil 3002 GENERAL HISTORY OF WESTERN PHILOSOPHY.** 5 degree credits, \$77.50. (◆\$38.75)

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 for Greek and Latin [see page 359])

**Spring Qtr** Sec 1 **W**—6:20-8:50, ForH 359

**Phil 3003 GENERAL HISTORY OF WESTERN PHILOSOPHY.** 5 degree credits, \$77.50. (◆\$38.75) (IS)

Survey of major developments in Western philosophic thought: early modern philosophy from Descartes through Hume; impact of science; backgrounds of contemporary philosophical problems. (No prereq)

**Winter Qtr** Sec 1 **T**—6:20-8:50, ForH 175, Lewis

**Phil 3004 GENERAL HISTORY OF WESTERN PHILOSOPHY.** 5 degree credits, \$77.50. (◆\$38.75) (IS)

Survey of major developments of Western philosophic thought: later modern philosophy from Kant through 19th century. (No prereq)

**Fall Qtr** Sec 1 **M**—6:20-8:50, ForH 285, Mason

**Phil 3201 ELEMENTS OF SYMBOLIC LOGIC I.** 5 degree credits, \$5201, \$77.50. (◆\$38.75)

Development of a formalized language. Syntax and semantics of sentential and first-order predicate logic. Deductive systems. (No prereq. Meets concurrently with 5201)

**Winter Qtr** Sec 1 **T**—6:20-8:50, ForH 130, Hanson

**Phil 3231 INTRODUCTION TO THE PHILOSOPHY OF LANGUAGE.** 5 degree credits, \$77.50. (◆\$38.75)

Discussion and analysis of elementary issues concerning the nature of reference, linguistic convention, linguistic truth, translation, synonymy or the relation between language and thought. (No prereq)

**Winter Qtr** Sec 1 **W**—6:20-8:50, ForH 349, Savage

Symbols, abbreviations, off-campus class locations begin on page 401.

**Phil 3302 MORAL PROBLEMS OF CONTEMPORARY SOCIETY.** 5 degree credits, \$77.50. (◆\$38.75)

Analyses of selected moral problems of current interest. (No prereq)

**Fall Qtr** Sec 1 T—6:20-8:50, ForH 130, Maxwell

**Spring Qtr** Sec 2 W—6:20-8:50, ForH 349

**Phil 3502 INTRODUCTION TO AESTHETICS.** 5 degree credits, \$77.50. (◆\$38.75)

An examination of different views as to the nature and function of art and the role of representation, expression, and aesthetic experience. (No prereq)

**Fall Qtr** Sec 1 W—6:20-8:50, ForH 120, Hochberg

**Phil 3521 PHILOSOPHY OF RELIGION.** 5 degree credits, \$5521, \$77.50. (◆\$38.75)

Discussion of grounds and sanctions of religion, according to various philosophies. (No prereq. Meets concurrently with 5521)

**Spring Qtr** Sec 1 T—6:20-8:50, ForH 130, Hopkins

**Phil 5041 LOCKE.** 5 degree credits, \$85. (◆\$42.50)

Detailed study of the **Essay Concerning Human Understanding**. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 Th—6:20-8:50, ForH 359, Gunderson

**Phil 5076 THOREAU.** 5 degree credits, \$85. (◆\$42.50)

Study of **Walden** and selected essays. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 Th—6:20-8:50, ForH 359, Dolan

**Phil 5201 ELEMENTS OF SYMBOLIC LOGIC I.** 5 degree credits, \$3201, \$85. (◆\$42.50)

Development of a formalized language. Syntax and semantics of sentential and first-order predicate logic. Deductive systems. (No prereq. Meets concurrently with 3201. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 T—6:20-8:50, ForH 130, Hanson

**Phil 5321 THEORIES OF JUSTICE.** 5 degree credits, \$85. (◆\$42.50)

Philosophical accounts of the concept and principles of justice. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 M—6:20-8:50, ForH 285, Mason

**Phil 5324 ETHICS AND EDUCATION.** 5 degree credits, \$85. (◆\$42.50)

Recent studies relating ethical theory and philosophy of education; theories of moral development and moral education. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 M—6:20-8:50, ForH 160, Terrell

**Phil 5521 PHILOSOPHY OF RELIGION.** 5 degree credits, \$3521, \$85. (◆\$42.50)

Discussion of grounds and sanctions of religion, according to various philosophies. (No prereq. Meets concurrently with 3521. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 T—6:20-8:50, ForH 130, Hopkins

**Phil 5601 PHILOSOPHY OF SCIENCE.** 5 degree credits, \$85. (◆\$42.50)

Meaning, methods, and implications of modern science. Basic concepts, presuppositions, and procedures. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 M—6:20-8:50, ForH 349, Maxwell

Symbols, abbreviations, off-campus class locations begin on page 401.



**Phil 5815 MINDS, BODIES AND MACHINES.** 5 degree credits, \$85. (◆\$42.50)

Philosophical relevance of cybernetics, artificial intelligence, and computer simulation. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 **Th**—6:20-8:50, ForH 115, Gunderson

**Phil 5760 SELECTED TOPICS IN PHILOSOPHY: MEDICAL ETHICS.** 5 degree credits, \$85 (◆\$42.50)

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 to serve medical and nursing students, philosophy majors, pre-med students and others interested in medical ethics. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 **Th**—6:20-8:50, ForH 285, Dolan

**Spring Qtr** Sec 2 **T**—6:20-8:50, ForH 285

**Phil 5781 CONTEMPORARY EXISTENTIALISM.** 5 degree credits, \$85. (◆\$42.50)

Selected topics in writings of existentialist philosophers since Kirkegaard. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 **W**—6:20-8:50, ForH 130, Hochberg

## photography

(See Arts, Studio; Journalism; and Physics)

## physical education and recreation (PE)

(See also Education)

*Bruce Anderson, Associate Professor of Physical Education*

*Nina Chenault, Instructor in Physical Education*

*Maria Drake, Instructor in Physical Education*

*Robert Fusaro, Instructor in Physical Education*

*Elizabeth Griffin, Instructor in Recreation*

*Richard Hunt, Instructor in Physical Education*

*Nadine Jette, Assistant Professor of Physical Education*

*March Krotee, Assistant Professor of Physical Education*

*Mary B. Lampe, Associate Professor of Physical Education*

*James LaPoint, Assistant Professor of Physical Education*

*James Marshall, Assistant Professor of Physical Education*

*G. Robert Mowerson, Associate Professor of Physical Education*

*Robert Rice, Instructor in Physical Education*

*Luly Santangelo, Lecturer in Physical Education*

*Lela June Stoner, Assistant Professor of Physical Education*

*Michael Tracy, Instructor in Physical Education*

Symbols, abbreviations, off-campus class locations begin on page 401.

**School of Physical Education, Recreation, and School Health Education  
CONTINUING EDUCATION**

A wide variety of programs in school health education, physical education, and recreation are available to local school districts who wish to jointly design a continuing education experience to meet unique local staff needs. For further information in regard to individually designed programs for a particular district or building staff contact: Mary Lampe, Coordinator, Continuing Education for the School of Physical Education and Recreation, Norris Hall, University of Minnesota, Minneapolis, Minnesota 55455; or call (612) 373-3206.

Some physical education classes carry no credit and, except for scuba, require no prerequisite. A health examination is required for admission to all children's physical education classes. It is assumed that the health of adults registering for recreation classes will be equal to the demands of the activities in which they are to participate.

Registration for physical education classes may be made by mail or in person. If you register by mail please read carefully the information on Limited Class Registration (page 23).

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 1024 MODERN DANCE.** 1 degree credit, \$15.50.

**new**

Introduction to fundamental techniques of modern dance. (No prereq. Limited to 18 students)

**Fall Qtr** Sec 1 Th—6-8, NorrisH 68, Drake

**\*PE 1035 KARATE.** 1 degree credit, \$15.50 plus \$3 course fee. Total \$18.50.

Emphasis on learning basic stances, blocks, and attacks in addition to hand and foot techniques and practice in first form. (No prereq. Limited to 40 students)

**Fall Qtr** Sec 1 T—7-9, StadN 205, Fusaro, Chenault

**Winter Qtr** Sec 2 T—7-9, StadN 205, Fusaro, Chenault

**\*PE 1036 PADDLEBALL-RAQUETBALL.** 1 degree credit, \$15.50.

Basic fundamentals of skills and shots; rules and game strategy are stressed. (No prereq. Limited to 22 students)

**Winter Qtr** Sec 1 Sa—8 a.m.-10, StadN 208

**Spring Qtr** Sec 2 Sa—8 a.m.-10, StadN 208, Krotec

**\*PE 1056 NORDIC, CROSS COUNTRY SKIING.** 1 degree credit, \$15.50.

**new**

Basic techniques in Nordic skiing. Participation in an exercise and conditioning program preparatory to skiing. (No prereq. Limited to 30 students)

**Winter Qtr** Sec 1 Sa—9 a.m.-11, Gym Classroom, StP Campus, Tracy

**\*PE 1074 VOLLEYBALL.** 1 degree credit, \$15.50.

Fundamental skills and rules of volleyball as well as basic team play and strategy. (No prereq. Limited to 26 students)

**Winter Qtr** Sec 1 M—5:30-7:30, NorrisH 151

**\*PE 1124 MODERN DANCE.** 1 degree credit, \$15.50.

**new**

Basic techniques of modern dance and improvisation. (Prereq 1024. Limited to 18 students)

**Winter Qtr** Sec 1 Th—6-8, NorrisH 68, Drake

★**PE 1135 KARATE.** 1 degree credit, \$15.50 plus \$3 course fee. Total \$18.50.

Basic concepts from PE 1035 expanded and developed. Basic Ippon Kumite (one attack sparring), Juippon Kumite (semi-free sparring), Kumite (free sparring) will be explored. Combination techniques for both arms and legs and basic form Heion #1 and #2 will also be included. (Prereq 1035. Limited to 40 students)

Spring Qtr Sec 1 T—7-9, StadN 205, Fusaro, Chenault

★**PE 1224 MODERN DANCE.** 1 degree credit, \$15.50.

Modern dance techniques and its relationship to form, design and exploration of movement. (Prereq 1124. Limited to 18 students)

Spring Qtr Sec 1 W—6-8, Norrish 68, Drake

★**PE 1410 WATER SAFETY INSTRUCTOR.** 2 degree credits, \$31 plus \$3 course fee. Total \$34.

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—6-10, Norrish 58, Stoner

★**PE 1657 OFFICIATING SOCCER.** 1 degree credit, \$15.50.

Rules of the game, techniques of officiating; opportunity to qualify as soccer official through the Minnesota Soccer Referee's Association. **May not be taken S-N.** (Prereq 1072 or #. Limited to 30 students)

Spring Qtr Sec 1 M—6:30-8:30, CH 215, Hunt

**PE 3111 MECHANICS OF MOVEMENT.** 3 degree credits, \$46.50.

Structure of the body, principles and mechanics of bodily movements. **May not be taken S-N.** (Prereq Anat 1027, Physics 1061)

Fall Qtr Sec 1 W—6-9, Sandburg JHS 211, Golden Valley; Stoner

★**PE 3114 PREVENTION AND CARE OF INJURIES.** 3 degree credits, \$46.50.

Policies for conditioning athletes in interscholastic and intercollegiate sports; safety controls. **May not be taken S-N.** (Prereq 3110 or Anat 1027. Limited to 30 students)

Fall Qtr Sec 1 T—7:30-9:30 (one additional hour arr.), BFAB 125, Marshall

★**PE 3143 ORGANIZATION AND MANAGEMENT OF SPORT.** 3 degree credits, \$46.50.

Principles, policies and procedures involved in the coaching of interscholastic sports. **May not be taken S-N.** (Prereq 2 credit coaching course. Limited to 30 students)

Winter Qtr Sec 1 M—6-8 (one additional hour arr.), Norrish 201, LaPoint

★**PE 3181 DANCE THERAPY.** 2 degree credits, \$31.

For students and teachers interested in dance therapy as a means of communication and interaction for the emotionally disturbed and/or handicapped person. **May not be taken S-N.** (No prereq. Limited to 20 students)

Winter Qtr Sec 1 W—6-8, Norrish 68, Jette

★**PE 5181 WORKSHOP: DYNAMICS OF THERAPEUTIC DANCE/MOVEMENT.** 1 degree credit (maximum 9 cr) \$17 plus \$10 special fee. Total \$27.

Movement laboratory integrating theory and experience in therapeutic dance; individual movement behavior and its relationship to verbal communication and the on-going process; includes field work observation. **May not be taken S-N.** (Prereq 3181 or #. Limited to 12 students. Qualified students may register for graduate credit at the University of Minnesota)

*All registration is by mail at least 2 weeks in advance of the class. Write Dynamics of Therapeutic Dance Workshop, 202 Westbrook Hall, 178 SE 15 Ave, University of Minnesota, Minneapolis, MN 55455.*

Symbols, abbreviations, off-campus class locations begin on page 401.

<b>Spec Term Oct 28, 29, 30</b>	Sec 1 <b>ThFSa</b> —1-4, NorrisH 68, Santangelo
	Sec 2 <b>ThFSa</b> —6-9, NorrisH 68, Santangelo
<b>Spec Term Jan 27, 28, 29</b>	Sec 3 <b>ThFSa</b> —1-4, NorrisH 68, Santangelo
	Sec 4 <b>ThFSa</b> —6-9, NorrisH 68, Santangelo
<b>Spec Term Apr 14, 15, 16</b>	Sec 5 <b>ThFSa</b> —1-4, NorrisH 68, Santangelo
	Sec 6 <b>ThFSa</b> —6-9, NorrisH 68, Santangelo

**★PE 5620 PRACTICUM: PREVENTION AND CARE OF ATHLETIC INJURIES.** 3 degree credits, \$51 plus \$5 course fee. Total \$56.

An overview of problems (recognition, principles, responsibilities) related to athletic injuries in secondary and college programs; demonstration and practice in training techniques and familiarity with use of instruments for athletic rehabilitation. (The course is open to men and women teachers who wish to qualify for the Minnesota Public Secondary Athletic Coaching Certification.) **May not be taken S-N.** (Prereq Anat 1027 or equiv. Limited to 35 students. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 **T**—7-9:30, BFAB 125, Marshall

**PE 5700 WORKSHOP: DANCE IN EDUCATION.** 3 degree credits (maximum 12 cr) \$51.

History, principles, instructional techniques and materials for teaching dance in schools and recreational agencies. (**Focus this offering: Creative dance for children**) **May not be taken S-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 **T**—6-9, NorrisH 68, Jette

**PE 5700 WORKSHOP: DANCE IN EDUCATION.** 3 degree credits (maximum 12 cr) \$51.

History, principles, instructional techniques and materials for teaching dance in schools and recreational agencies. (**Focus this offering: Teaching of Modern Dance**) **May not be taken S-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 2 **M**—6-9, NorrisH 68, Rice

For information on non-credit conferences and workshops in physical education, please contact the Department of Conferences and Institutes, 131 Nolte Center for Continuing Education; telephone 373-3151.

A health examination is required of all boys and girls taking swimming classes. Each child must bring a letter from his (her) physician to the first class meeting stating approval of the activity in which he (she) is registered.

**★PE 0001 SWIMMING FOR CHILDREN.** No credit, \$25 plus \$3 course fee. Total \$28.

A course in swimming for children between the ages of 6 and 14 years. Each child must furnish his (her) own towel and swimming suit; (also a cap). Sections are classified as follows: **Beginners**—non-swimmers; **Intermediates**—those who can swim 25 yards of two or more strokes; **Competitive Techniques**—same as Advanced Intermediates plus preparation for competitive swimming. (The first meeting will be used for the purpose of reclassifying swimmers where necessary. Each section limited to 20 students)

**Spec Class April 2-June 11**

(See Spring quarter registration dates, page 21. No late fee through Mar. 30)

**BEGINNERS**

Sec 1 **Sa**—8:45 a.m.-9:30, NorrisH 51, Lampe

**INTERMEDIATES**

Sec 2 **Sa**—9:30 a.m.-10:15, CH 15, Mowerson

**COMPETITIVE TECHNIQUES**

Sec 3 **Sa**—10:15 a.m.-11, CH 15, Mowerson

**★PE 0100 SPRINGBOARD DIVING FOR BOYS AND GIRLS.** No credit, \$25 plus \$3 course fee. Total \$28.

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)

Symbols, abbreviations, off-campus class locations begin on page 401.

board. Instruction will be limited primarily to the low diving board. Each child must furnish own suit and towel and cap. Limited to 12 students)

**Spec Class April 2-June 11**

**Sec 1 Sa—11 a.m.—11:45, CH 15, Lincoln**

(See Spring quarter registration dates, page 21. No late fee through Mar. 30)

**\*PE 0150 GOLF.** No credit, \$31 plus \$3 course fee. Total \$34.

The fundamentals of golf. Open to men and women and all ninth grade through senior high students regardless of experience. Development of a swing pattern and putting stroke. All sessions will be held in the golf gymnasium. Students furnish their own clubs; bring only a 5 iron to the first meeting. (No prereq. Limited to 20 students)

(See Spring quarter registration dates, page 21. No late fee through Mar. 30)

**Spec Class April 4-June 6**

**Sec 1 M—6-7, StadS 267, LaPoint**

**Sec 2 M—7-8, StadS 267, LaPoint**

**Spec Class April 6-June 8**

**Sec 3 W—6-7, StadS 267, Anderson**

**Sec 4 W—7-8, StadS 267, Anderson**

**Spec Class April 7-June 9**

**Sec 5 Th—6-7, Norrish 60**

**\*PE 0250 SWIMMING FOR MEN AND WOMEN.** No credit. \$46.50 plus \$3 course fee. Total \$49.50

Class and individual instruction for beginners in all swimming strokes and in diving. (No prereq. Limited to 25 students)

**Spec Class March 28-June 6**

**Sec 1 M—8-9, CookeH 10, LaPoint**

(See Spring quarter registration dates, page 21. No late fee through March 23)

**\*PE 0255 SCUBA FOR MEN AND WOMEN.** No credit, \$46.50 plus \$3 course fee. Total \$49.50.

The course covers all of the techniques and safety features of scuba. Upon satisfactory completion of this course, the student will be certified by the National Association of Underwater Instructors and will receive a wallet card so stating. (Prereq ability to swim 440 yards free style, float as motionless as possible for 10 minutes, tread water without hands for 3 minutes, swim 75 feet under water, recover 10-pound object in 10 feet of water from surface dive, tow a quiescent victim 50 yards, and be at least 15 years of age. Limited to 18 students)

**Spec Class March 30-June 8**

**Sec 1 W—7:30-9:30, CH 15, Mowerson**

(See Spring quarter registration dates, page 21. No late fee through Mar. 25)

## physical medicine and rehabilitation (PMed)

(See also Anatomy; Physiology; GC 1132, Biological Science: The Human Body; GC 3615, The Rehabilitation Process)

*A. Joy Huss, Assistant Professor of Physical Medicine and Rehabilitation*

**\*PMed 5182 FUNCTIONAL NEUROANATOMY AND NEUROPHYSIOLOGY.** 3 degree credits. \$51 plus \$4 course fee. Total \$55.

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 #. 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**

Symbols, abbreviations, off-campus class locations begin on page 401.

# physics (Phys)

Hans Courant, Professor of Physics

Carl H. Poppe, Associate Professor of Physics

**Phys 1031-1032 INTRODUCTORY PHYSICS: MEASUREMENT AND APPLICATIONS.** 5 degree credits each semester, \$77.50 plus \$10 special fee. Total \$87.50 each semester. (♦\$38.75 plus \$10 special fee. Total \$48.75) (IS)

Demonstration lectures, problem sessions and laboratory exercises on topics in physics. Application of physics will be emphasized. Topics include mechanics, random processes, gases and fluids, electric circuits, feedback and control, waves, light, optical instruments, atoms and spectra, nuclei, and radioactivity. Primarily for students interested in those topics useful in various technical areas, but also for CLA distribution requirements. Laboratory sections will meet for 2 hours on Saturday morning or Thursday evening. Sections will be assigned at the first class period and will meet eight times during the semester. (Prereq HS algebra and plane geometry for 1031; 1031 for 1032)

**Fall Sem 1031** Sec 1 T—6-8:30, Ph 133 (lab hours arr.), Poppe

**Spring Sem 1032** Sec 2 T—6-8:30, Ph 133 (lab hours arr.), Poppe

**Phys 1271 GENERAL PHYSICS.** 4 degree credits, \$62. (♦\$31)

Calculus-level general physics course. Mechanics. (Prereq Math 1221 or  $\mathbb{I}$ 1221 or Math 1321 or  $\mathbb{I}$ Math 1321 or equiv; may be taken with or without Phys 1275 lab)

**Fall Sem** Sec 1 T—6-9, Ph 131

**Phys 1275 GENERAL PHYSICS LABORATORY.** 1 degree credit, \$15.50 plus \$10 course fee. Total \$25.50.

Laboratory exercises in mechanics. **This course offered S-N only.** (Prereq 1271 or  $\mathbb{I}$ 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, \$62. (♦\$31)

Calculus level general physics course. Heat, electricity. (Prereq 1271 and Math 1231 or  $\mathbb{I}$  or equiv)

**Spring Sem** Sec 1 T—6-9, Ph 131

**Phys 1285 GENERAL PHYSICS LABORATORY.** 1 degree credit, \$15.50 plus \$10 course fee. Total \$25.50.

Laboratory exercises in electricity. **This course offered S-N only.** (Prereq 1281 or  $\mathbb{I}$ 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, \$62.

Magnetism, optics. (Prereq 1281; may be taken with or without Phys 1295 lab)

**Fall Sem** Sec 1 T—6-9, Ph 170

**Phys 1295 GENERAL PHYSICS LABORATORY.** 1 degree credit, \$15.50 plus \$10 course fee. Total \$25.50.

Laboratory exercises in magnetism and optics. **This course offered S-N only.** (Prereq 1291 or  $\mathbb{I}$ 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.

Symbols, abbreviations, off-campus class locations begin on page 401.

**Phys 3801 INTRODUCTION TO THE PHYSICS OF PHOTOGRAPHY.** 5 degree credits. \$77.50 plus \$10 course fee. Total \$87.50. (♦\$38.75 plus \$10 course fee. Total \$48.75)

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, Courant (2 additional hrs per wk arr.)

(See also photography courses in Arts, Studio; and Journalism)

## physiology (PhsI)

*Gordon Kepner, Assistant Professor of Physiology*

★**PhsI 1001 HUMAN PHYSIOLOGY.** 4 degree credits. \$62 plus \$10 course fee. Total \$72.

Human organ systems, normal and pathological functions, feedback regulation and control. Everyday aspects of body function and health. (Prereq high school biology, high school chemistry or  $\mathbb{E}$ . Limited to 40 students)

**Fall Qtr** Sec 1 **Lect M**—6-7:45, HSUnitA 3-110, Kepner  
**Dis W**—6-8, HSUnitA 3-110

★**PhsI 5094-5095 HUMAN PHYSIOLOGY.** 4 degree credits each quarter. \$68 each quarter.

Survey from a regulatory and control system point of view, with emphasis on pathophysiology and regulatory imbalances in disease. (Prereq biochemistry, human or mammalian anatomy. Primarily for medical-surgical and public health nurses. Limited to 40 students. Students interested in graduate credit should inquire at time of registration)

**Fall Qtr 5094** Sec 1 **W**—6-9, MlrDH 307  
**Winter Qtr 5095** Sec 2 **W**—6-9, MlrDH 307

**new**

## plant pathology (PIPa)

(See also Agriculture, Botany and Horticulture)

*Bill W. Kennedy, Professor of Plant Pathology*

*David H. MacDonald, Associate Professor of Plant Pathology*

*Erwin Stewart, Assistant Professor of Plant Pathology*

★**PIPa 1002 INTRODUCTORY PLANT PATHOLOGY—PATHOGENS.** 2 degree credits. \$1001, 5003. \$31.

An introduction to the characteristics of the most important biotic and abiotic causes of plant diseases. (Prereq 9 cr plant science. Meets concurrently with 5003. PIPa 1002 and 1003 are equivalent to PIPa 1001. Limited to 15 students)

**Winter Qtr** Sec 1 **M**—6:30-9:30, StakH 103, 105, StP Campus, MacDonald

★**PIPa 1003 INTRODUCTORY PLANT PATHOLOGY—REPRESENTATIVE PLANT DISEASES.** 3 degree credits, \$1001, 5004. \$46.50.

A study of representative plant diseases that are of significance in Minnesota. (Prereq PIPa 1002. Meets concurrently with 5004. Limited to 15 students)

**Spring Qtr** Sec 1 **M**—6:30-9:30, StakH 103, 105, StP Campus, MacDonald

**new**

**PIPa 3104 FUNDAMENTALS OF MUSHROOM IDENTIFICATION.** 3 degree credits. Offered fall 1977 and alternate years. Stewart

Symbols, abbreviations, off-campus class locations begin on page 401.

★**PIPa 5003 INTRODUCTORY PLANT PATHOLOGY FOR ADVANCED STUDENTS—PATHOGENS.** 1 degree credit, \$1002, 5001, \$17.

**new**

See course description for 1002. (Prereq 14 credits plant science or §. Meets concurrently with 1002. PIPa 5003 and 5004 are equivalents to PIPa 5002. Qualified students may register for graduate credit at the University of Minnesota. Limited to 10 students)

**Winter Qtr Sec 1 M—6:30-9:30, StakH 103, 105, StP Campus, MacDonald**

★**PIPa 5004 INTRODUCTORY PLANT PATHOLOGY FOR ADVANCED STUDENTS—REPRESENTATIVE PLANT DISEASES.** 2 degree credits, \$1003, 5001, \$34.

**new**

See course description for 1003. (Prereq 5003. Meets concurrently with 1003. Qualified students may register for graduate credit at the University of Minnesota. Limited to 10 students)

**Spring Qtr Sec 1 M—6:30-9:30, StakH 103, 105, StP Campus, MacDonald**

**PIPa 5702 PRINCIPLES OF PLANT DISEASE CONTROL.** 3 degree credits, \$51 (♦\$25.50)

Emphasis will be placed on three areas: 1) survey and evaluation of control methods (biological, chemical, regulatory—including changes imposed by the times); 2) consideration of new ideas that have suspected potential and/or predictive value; 3) observation and discussion related to selected greenhouse, laboratory, and field experiments which demonstrate principles of prevention or control of specific plant diseases. (Prereq fundamental course in plant pathology recommended; or course in bacteriology, mycology or basic botany and §. 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 3844, Minnesota Parties and Politics; Hist 3881, History of American Foreign Relations; IR 3000, 8000, Organized Labor and the Political Process; Phil 1004, Political Philosophy; and non-credit Informal Courses, page 196)

*Charles Backstrom, Professor of Political Science*

*Terence W. Ball, Assistant Professor of Political Science*

*Roger W. Benjamin, Associate Professor of Political Science*

*Robert B. Eyestone, Associate Professor of Political Science*

*Edwin Fogelman, Professor of Political Science*

*Milda Hedblom, Assistant Professor of Political Science*

*P. Terrence Hopmann, Associate Professor of Political Science*

*Samuel H. Kernell, Assistant Professor of Political Science*

*Samuel Krislov, Professor of Political Science*

*Robert B. Kvavik, Assistant Professor of Political Science*

*William D. Morris, Assistant Professor of Political Science*

*August H. Nimitz, Jr., Assistant Professor of Political Science*

*L. Earl Shaw, Jr., Assistant Professor of Political Science*

*John E. Turner, Professor of Political Science*

*Charles H. Walcott, Assistant Professor of Political Science*

*Gary W. Wynia, Associate Professor of Political Science*

*All graduate students can use only 8001 through 8998 level seminars to satisfy major requirements; they should take lower-level political science courses only to correct deficiencies in background when directed to do so by advisers.*

**A MAJOR IN POLITICAL SCIENCE CAN BE COMPLETED IN THE EVENING.**

Those courses required in the major are offered every 2 years. Interested students should discuss plans with an Extension counselor (373-3905).

Symbols, abbreviations, off-campus class locations begin on page 401.



**BA Major Sequence****Required Preparatory Courses**

1001, 1051

**Major Requirements**

At least 36 cr in 3xxx- or 5xxx-level political science courses (not more than 16 cr in any one field nor more than 28 cr in any two fields). The recognized fields are shown by subheads among the course descriptions.

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

**general education****Pol 1001 AMERICAN GOVERNMENT AND POLITICS.** 5 degree credits, \$77.50. (◆\$38.75) (IS)

Analysis of principles, organization, processes, functions of government and the interplay of political forces in United States—national, state and local. Attention given throughout to current issues. (No prereq)

**Fall Qtr** Sec 1 T—6:20-8:50, AndH 250, Walcott

**Fall Sem** ★Sec 2 M—7-9:15, Sandburg JHS 205, Golden Valley; Eyestone  
(Limit 35 students)

**Spring Sem** Sec 3 M—7-9:15, AndH 270, Morris

**Pol 1025 WORLD POLITICS.** 4 degree credits, \$62. (◆\$31) (IS)

Introduction to contemporary international relations, forms of state interaction; problems of conflict and cooperation. (No prereq)

**Fall Qtr** Sec 1 Sa—9 a.m.-11, BlegH 130, Hopmann

**Spring Qtr** ★Sec 2 T—7-9:30, Minnetonka HS 119 (Limit 40 students)

**★Pol 1027 URBAN POLITICS.** 4 degree credits, \$62. (◆\$31)

Urban politics and issues facing American cities. Emphasis on political conflicts over economic and social problems. (No prereq. Limited to 60 students)

**Winter Qtr** Sec 1 T—7-9:30, Southwest HS 9, Nimitz

(See also Urban Studies; GC 1212, Urban Problems; GC 3285, Anthropology of the City; GC 3292, Urban Problems—Geographic Perspectives; Soc 5601, Urban Sociology; Soc 3601, Urban Community)

**Pol 1031 SELECTED PROBLEMS IN AMERICAN PUBLIC POLICY.** 4 degree credits, \$62. (◆\$31) (IS)

Analysis of several major public policy issues such as: social welfare policy, education policy, economic policy. Emphasis upon forces molding policy choices and the impact of such choices. (No prereq)

**Winter Qtr** Sec 1 M—6:20-8:50, AndH 370, Hedblom

(See also Public Affairs)

**Pol 1041 CONTEMPORARY POLITICAL IDEOLOGIES.** 4 degree credits, \$62. (◆\$31)

Major modern and contemporary ideologies, such as liberalism, democracy, conservatism, socialism, communism, facism, nationalism, imperialism, racism. Emphasis on adequacy of alternative ideologies for the analysis and solutions of current political and social issues. (No prereq)

**Spring Qtr** Sec 1 M—6:20-8:50, BlegH 155, Fogelman

**Pol 1051 INTRODUCTION TO POLITICAL ANALYSIS.** 5 degree credits, \$77.50. (◆\$38.75)

Topics such as formation of political communities, political participation, policy making, compliance, legitimacy, political development, types of political systems. Emphasis on empirical and normative problems. Applications to major contemporary systems. (No prereq)

**Fall Qtr** Sec 1 W—6:20-8:50, BlegH 440, Kvavik

Symbols, abbreviations, off-campus class locations begin on page 401.

**Pol 3306 THE AMERICAN PRESIDENCY.** 4 degree credits, \$62. (◆\$31)



Study of the office and individual Presidents; focus on both organizational characteristics of the Executive Office of the President and individual qualities of decision-making; relationships with Congress, the bureaucracy, parties, interest groups, media, and public opinion. (No prereq)

Fall Qtr Sec 1 Th—6:20-8:50, AndH 230, Kernell

**Pol 3661 PROBLEMS OF DEMOCRACY.** 4 degree credits, \$62. (◆\$31)



Postulates and implications; moral foundations; democratic theory and the economic order; liberty and authority; equality; representation; participation; majority rule; critics of democracy; social science and democratic theory. (No prereq)

Fall Qtr Sec 1 T—6:20-8:50, BlegH 220, Shaw

**Pol 3668 RECENT EMPIRICAL THEORY.** 4 degree credits, \$62. (◆\$31)



Selected empirical theories such as theories of power, systems theory, game theory, structural functionalism, and conflict theory. Emphasis on the usefulness of these formulations in political analysis. (No prereq)

Winter Qtr Sec 1 T—6:20-8:50, BlegH 145, Benjamin

## american governmental systems and processes

**Pol 5322 AMERICAN SOCIAL POLICY.** 4 degree credits. To be offered 1977-78.

## comparative government and politics

**Pol 5443 GOVERNMENT AND POLITICS OF THE SOVIET UNION.** 4 degree credits, \$68. (◆\$34) (IS)



The rise of Bolshevism; sources and nature of Bolshevism ideology; history and institutional character of the Soviet regime sources of power; role of the party and functional groups; patterns of change. (Prereq 1051 or 12 cr in social science or §. May not be taken for graduate credit)

Winter Qtr Sec 1 Th—6:20-8:50, BlegH 220, Turner

**Pol 5448 GOVERNMENT AND POLITICS OF AFRICAN COUNTRIES.** 4 degree credits. To be offered 1977-78. (IS)

**Pol 5455 LATIN AMERICAN GOVERNMENT AND POLITICS.** 5 degree credits, \$85. (◆\$42.50)



Latin American political heritage, political processes, and complex public issues; resolution of the problem of social, economic, and political change in selected countries. May be applied toward the CLA foreign language requirement, Route II for Spanish and Portuguese [see page 359]. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Sem Sec 1 T—7-9:15, BlegH 150, Wynia

**Pol 5457 POLITICS AND GOVERNMENT IN ISRAEL.** 4 degree credits, \$68. (◆\$34)



Governmental structure of Israel and its political matrix. Problems of a society created under external stress, with planned institutions. The role of nominally ideological parties in a pragmatic political arrangement; conflict over a theocratic base for a modern secular state. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

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

## political theory

**Pol 5659 AMERICAN POLITICAL THOUGHT.** 4 degree credits, \$68. (◆\$34)



From colonial times to present: Puritanism; Constitution; utopianism; Calhoun; history of anarchist, socialist, populist, and syndicalist thought; social Darwinism;

Symbols, abbreviations, off-campus class locations begin on page 401.

conservatism; political thought in law and literature. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 Th—7-9:30, BlegH 430, Ball

## politics and behavior

See TV course, Pol 5503, *The Constitution: What is it Today*, page 312.

**Pol 5738 POLITICAL CAMPAIGNS AND ELECTIONS.** 4 degree credits, \$68. (♦\$34)

National, state, and local campaigns and elections; fieldwork in local political parties and election campaigns. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 M—6:20-8:50, SocSci 860, Backstrom

**Pol 5767 PUBLIC OPINION AND VOTING BEHAVIOR.** 5 degree credits. To be offered 1977-78.

## international relations

**Pol 5876 FOREIGN POLICY DECISION MAKING.** 4 degree credits. To be offered 1977-78.

**Pol 5884 THE INTERNATIONAL SYSTEM.** 4 degree credits, \$68. (♦\$34)

The structure of the international system: balance of power, bipolar, and other types of international systems; theories of stability, change, conflict and cooperation. (Prereq 1025 or 1026 or 3825 or 3826. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 W—6:20-8:50, BlegH 340

*The following are day school classes in Political Science for which Extension students may register. Registration for these is the same as for Extension classes. For course descriptions, see the current College of Liberal Arts Bulletin available from the Bulletin & Service Bureau (373-2153) room B-3 Morrill Hall.*

**Pol 3070 DIRECTED FIELD STUDIES.** Credits arr., \$15.50 per credit.

Students may obtain credit for faculty supervised research related to work in political or governmental organizations. Instructor must sign directed studies form. (Prereq †. A joint Day/Extension class.)

Fall Qtr Sec 1 Arr., Backstrom

Winter Qtr Sec 2 Arr., Backstrom

Spring Qtr Sec 3 Arr., Backstrom

**Pol 3352, 3353 FIELD WORK IN LEGISLATURE.** 4 degree credits each quarter, \$62 each quarter.

Field study of politics, leadership, organization, and activities in state government. (Prereq 1001. A joint Day/Extension class.)

Winter Qtr 3352 Sec 1 TTh—3:15-5, Backstrom

Spring Qtr 3353 Sec 2 TTh—3:15-5, Backstrom

**Pol 3773 POLITICAL DEVELOPMENT.** 4 degree credits, \$62.

(A joint Day/Extension class)

Fall Qtr Sec 1 TTh—2:15-3:30, BlegH 120, Benjamin

**Pol 3751 FIELD WORK IN POLITICS.** 4 degree credits, \$62.

(Prereq 1001. A joint Day/Extension class)

Fall Qtr Sec 1 Th—3:15-5, BlegH 125, Backstrom

day/extension classes

Symbols, abbreviations, off-campus class locations begin on page 401.

**Poi 5304 ORGANIZATIONAL BEHAVIOR.** 4 degree credits, \$68.

(Prereq 1001. A joint Day/Extension class. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 MWF—2:15-3, AndH 230, Walcott

**Poi 5327 LOCAL GOVERNMENT AND POLITICS.** 4 degree credits, \$68.

(Prereq 1001 or §. A joint Day/Extension class. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 TTh—2:15-3:30, BlegH 130, Scott

**Poi 5669 RECENT POLITICAL THOUGHT.** 4 degree credits, \$68.

(Prereq 1051 or 9 cr in social science or §. A joint Day/Extension class. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 MWF—2:15-3, Fogelman

**Poi 5768 POLITICAL CULTURE: SOCIAL BASIS OF POLITICAL BEHAVIOR.** 5 degree credits, \$85.

(Prereq 1001 or §...5767 recommended. A joint Day/Extension class. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 TTh—2:15-4, Flanigan

**Poi 5885 INTERNATIONAL PEACE AND VIOLENCE.** 4 degree credits, \$IntR 5801. \$68.

(No prereq but 5884 strongly recommended. A joint Day/Extension class. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 MWF—2:15-3, BlegH 135, Hopmann

## portuguese

(See Spanish and Portuguese)

## psychological foundations (PsyF)

(See also Education)

*William M. Bart, Associate Professor of Educational Psychology*

*David W. Johnson, Professor of Educational Psychology*

*James R. Rest, Associate Professor of Educational Psychology*

*S. Jay Samuels, Professor of Educational Psychology*

*John Stecklein, Professor of Educational Psychology*

*James S. Terwilliger, Professor of Educational Psychology*

**PsyF 5110 INTRODUCTORY STATISTICAL METHODS.** 3 degree credits, \$51.

Basic statistical techniques; comprehension of literature using elementary concepts and methods. **May not be taken S-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 W—6:20-8:50, Bu 120, Stecklein

Spring Qtr Sec 2 Th—6:20-8:50, Arch 5, Terwilliger

**PsyF 5120 EDUCATIONAL MEASUREMENT IN THE CLASSROOM.** 3 degree credits, \$51.

Principles and methods for construction, evaluation, and improvement of classroom measures; techniques for describing results statistically; use of measurement in evaluating instruction and student performance; assignment of grades. **May not be taken S-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 Th—6:20-8:50, Bu 123, Terwilliger

Symbols, abbreviations, off-campus class locations begin on page 401.

★**PsyF 5148 PSYCHOLOGY AND PEDAGOGY OF READING.** 3 degree credits, \$51.

Physiological, psychological, and linguistic factors influencing beginning and fluent reading and their implications for instruction. **May not be taken S-N.** (No prereq. A joint Day/Extension class limited to 15 Extension students. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 **W**—5-7, Pt 214, Samuels

**PsyF 5162 PERSONALITY AND SOCIAL DEVELOPMENT.** 3 degree credits, \$51.

Major concepts and research findings in adjustment and development with special emphasis on educational implications. **May not be taken S-N.** (Prereq 5 cr in introductory psychology. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 **Th**—6:20-8:50, Pt 214, Rest

**PsyF 5170 SOCIAL PSYCHOLOGY OF EDUCATION.** 4 degree credits, \$68.

Concepts and theories in the field applied to educational problems and settings. Laboratory sessions to make applications and develop skills in group behavior. A joint Day/Extension class. **May not be taken S-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 **T**—4:15-7:15, Jones 11, D Johnson

**PsyF 5172 STRUCTURING LEARNING: SOCIAL PSYCHOLOGICAL APPROACHES.** 3 degree credits, \$51.

How to use cooperation, competition, and individualization to affect learning climate and cognitive and affective outcomes of instruction. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Spec Term** Sec 1 Oct. 1, 4—10 p.m.,  
Oct. 2, 8 a.m.-6 p.m.,  
Oct. 6, 4-10 p.m.,  
Oct. 13, 4-10 p.m.,  
Oct. 20, 4-10 p.m., FolH 308, Johnson

(See Fall quarter registration dates, page 13. No late fee through Sept. 27)

Sec 2 **Spring dates arr.**, Johnson

★**PsyF 5305 WORKSHOP IN HUMAN RELATIONS.** 6 degree credits (maximum 6 cr), \$CSPP 5305, Educ 5305. \$102 plus \$15 special fee. Total \$117.

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 teaching certificate. **Must be taken S-N.** Limited to 30 students. Approved to meet State Department of Education Edu 521 requirement for recertification. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 **M**—4:30-9:30, Arch 30  
Sec 2 **M**—4:30-5, Arch 55, 5-9:30, Arch 60  
Sec 3 **T**—4:30-9:30, Arch 15  
Sec 4 **T**—4:30-9:30, Arch 30  
**Winter Qtr** Sec 5 **M**—4:30-9:30, Arch 30  
Sec 6 **M**—4:30-9:30, Arch 45  
Sec 7 **T**—4:30-9:30, Arch 30  
Sec 8 **T**—4:30-9:30, Arch 45  
**Spring Qtr** Sec 9 **M**—4:30-9:30, Arch 45  
Sec 10 **M**—4:30-9:30, Arch 30  
Sec 11 **T**—4:30-9:30, Arch 45  
Sec 12 **T**—4:30-9:30, Arch 30

## psychology (Psy)

(See also Child Psychology, Counseling and Student Personnel Psychology; General College; Psychology in the Schools Training Program; Women's Studies; and Psychological Foundations)

Symbols, abbreviations, off-campus class locations begin on page 401.

*Mary J. Bradshaw, Instructor in Psychology*  
*Robert L. Jones, Professor of Journalism*  
*Arnold Kanarick, Clinical Associate Professor, Honeywell, Inc.*  
*James C. Kincannon, Clinical Associate Professor,*  
*Meadowbrook Treatment Center*  
*Leslie A. King, Professor of Psychological Studies*  
*Ernest Kemble, Associate Professor, Division of Social Science, Morris*  
*Mary Ann Mattoon, Clinical Assistant Professor, Jungian Analyst*  
*Roy W. Pickens, Professor of Psychology*  
*Vera M. Schletzer, Professor of Psychology*

**A MAJOR IN PSYCHOLOGY CAN BE COMPLETED IN THE EVENING.**

Those courses required in the major are offered yearly. If you decide to major, it is important to discuss your plans with an Extension counselor (373-3905).

**B.A. Major Sequence**

**Required Preparatory Courses**

1001, 1004-1005†\*\*

\*\*Should be taken as soon as possible after completion of 1001.

**Major Requirements:**

2 courses chosen from 3011, 3031, 3051, 3061, 5011, 5012-5013, 5014, 5015, 5017, 5018, 5019, 5031, 5054, 5061, 5062, 5071

2 courses chosen from 3101, 3124, 3201, 3604, 5141, 5501, 5701, 5702, 5703, CPsy 5303

3801\*\*

\*\*Should be taken as soon as possible after completion of 1001.

4 elective 3xxx-5xxx-level psychology. 1 to 4 optional elective 3xxx-5xxx-level psychology or child psychology courses or psychological foundations or counseling and student personnel psychology courses. For approved list call Extension Counseling.

Psychology courses at the 3xxx-5xxx-level must total at least nine, with a minimum total of 32 credits (CPsy 3301 and 5303 may be included), but all 3xxx-5xxx-level courses chosen for the major must not exceed 52 credits.

Psychology majors, especially those considering graduate work, are urged to elect courses in mathematics and in the natural, social, and physical sciences. Prospective graduate students should take further work in statistics and computer programming. Students not planning graduate work in psychology may, with adviser assistance, design programs that prepare for such paraprofessional services as interviewing, personnel work, mental health work, counseling, and research technician work.

Those interested in child psychology are encouraged to elect courses offered through the Institute of Child Development. They may consider majors in that area—double majors in psychology and child psychology are not permissible. Psychology majors are restricted in the number of child psychology courses acceptable for the major.

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

**Psy 1001 GENERAL PSYCHOLOGY.** 5 degree credits, \$77.50. (♦\$38.75) (IS)

Introduction to study of human behavior. Prerequisite for all advanced courses in psychology. (No prereq)

<b>Fall Sem</b>	Sec 1	<b>M</b> —6:20-8:50, SciCB 175
	Sec 2	<b>T</b> —6:20-8:50, NH 211
	★Sec 3	<b>W</b> —7-9:30, Kellogg HS 167-169, Little Canada (Limit 60 students)

Symbols, abbreviations, off-campus class locations begin on page 401.

- ★Sec 4 W—7-9:30, Nicollet JHS 226, Burnsville (Limit 60 students)
- Sec 5 Th—7-9:30, WuH 130
- Sec 6 Sa—9 a.m.-11:30, EltH N119
- Winter Qtr ★Sec 7 M—7-9:20, Elim Church, Robbinsdale (Limit 35 students)
- Spring Sem Sec 8 M—6:20-8:50, SmithH 325
- ★Sec 9 T—7-9:30, Sandburg JHS 213, Golden Valley (Limit 45 students)

**Psy 1003 APPLICATION OF PSYCHOLOGY TO LIVING.** 4 degree credits, \$62. (◆\$31)

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—7-9:30, Southwest HS, Mpls, Hendel (Limit 60 students)
- ★Sec 2 T—7-9:30, Hillside JHS, Maplewood; King (Limit 60 students)
- Sec 3 W—6:20-8:50, EltH N119, Paulson
- Winter Qtr Sec 4 M—6:20-8:50, EltH N119, Moen
- ★Sec 5 T—7-9:30, Minnetonka HS 120, Dorset (Limit 40 students)
- Sec 6 W—6:20-8:50, EltH N119, Hendel
- Sec 7 W—6:20-8:50, NH 211
- ★Sec 8 Sa—9:30 a.m.-12, Kellogg HS 233, Little Canada; Willmore (Limit 35 students)
- Spring Sem Sec 9 M—6:20-8, NH 211, Keierleber
- Spring Qtr ★Sec 10 M—7-9:30, Richfield HS 242, Paulson (Limit 30 students)
- ★Sec 11 M—7-9:20, Brooklyn Center HS 12, King (Limit 50 students)
- Sec 12 W—6:20-8:50, EltH N119, Buckley
- Sec 13 Th—7-9:30, Buffalo JHS, team room, Weiszhaar

(See also GC 1282, Applied Psychology)

**★Psy 1004-1005† INTRODUCTORY LABORATORY PSYCHOLOGY.** 4 degree credits each quarter, \$62 plus \$14 special fee plus \$1.50 course fee. Total \$77.50 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 11001 for 1004; 1004 for 1005. Limited to 24 students)

- Fall Qtr 1004 Sec 1 M—6:20-9:50, EltH 50-60
- Sec 2 T—6:20-9:50, EltH 50-60
- Winter Qtr 1005 Sec 3 T—6:20-9:50, EltH 50-60
- Sec 4 Th—6:20-9:50, EltH 50-60

**Psy 1911 PSYCHOLOGY AND RELIGION.** 4 degree credits, \$62. (◆\$31) (IS)

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, FolH 107, Bradshaw

**Psy 3011 INTRODUCTION TO THE PSYCHOLOGY OF LEARNING.** 4 degree credits, \$62. (◆\$31)

Survey of the basic methods in the study of learning. Development of fundamental concepts and principles governing the learning process. (Prereq 1001)

- Fall Qtr Sec 1 M—6:20-8:50, EltH N119
- Spring Qtr Sec 2 M—6:20-8:50, EltH N119

**★Psy 3031 SENSATION AND PERCEPTION.** 4 degree credits, \$62.

Roles of stimulus, receptor organ and brain, and of learning and motivation, in man's perception of his world. Lectures and demonstrations. (Prereq 1004 or 1. Limited to 40 students)

Symbols, abbreviations, off-campus class locations begin on page 401.

Fall Qtr Sec 1 T—6:20-8:50, WuH 130  
Spring Qtr Sec 2 T—6:20-8:50, Bu 125

**Psy 3051 INTRODUCTION TO COGNITIVE PSYCHOLOGY.** 4 degree credits, \$62.

Basic research problems and theoretical concepts in study of cognitive factors in perception, memory, and concept formation. (Prereq 1005 or T1005)

Fall Qtr Sec 1 T—6:20-8:50, WuH 230

**Psy 3124 PSYCHOLOGY OF INDIVIDUAL DIFFERENCES.** 4 degree credits, \$62.

The differential method in study of human behavior. Impact and importance of individual differences in modern society; instruments of measurement and behavior prediction in differential psychology; the major determinants of individuality. (Prereq 3801)

Winter Qtr Sec 1 W—6:20-8:50, WuH 130

**Psy 3061 INTRODUCTION TO PHYSIOLOGICAL PSYCHOLOGY.** 4 degree credits, \$62. (♦\$31)

Survey of neural mechanisms of motivation, emotion, sleep-wakefulness cycle, learning, and communication in animals and humans. (Prereq 1005 or Biol 1011 or §)

Winter Qtr Sec 1 Th—6:20-8:50, EltH N119, Kemble

**Psy 3101 INTRODUCTION TO PERSONALITY.** 4 degree credits, \$62. (♦\$31) (IS)

An overview of the field of personality, with discussions of personality theory, (e.g. the theories of Freud, Jung and Adler), of selected topics of empirical research in the field of personality, and of personality assessment. (Prereq 1001)

Fall Qtr Sec 1 T—6:20-8:50, EltH N119

Spring Qtr Sec 2 T—6:20-8:50, EltH N119

**Psy 3201 INTRODUCTION TO SOCIAL PSYCHOLOGY.** 4 degree credits, \$62. (♦\$31)

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, WuH 130

Spring Sem Sec 2 T—6:20-8, WuH 230

**Psy 3604 INTRODUCTION TO ABNORMAL PSYCHOLOGY.** 4 degree credits, \$62. (♦\$31) (IS)

The field of abnormal psychology. Etiologies of behavior disorders; discussion of available treatments. (Prereq 1001)

Fall Sem Sec 1 W—6:20-8, Ph 133

Spring Sem Sec 2 W—6:20-8, Ph 170

**Psy 3801 INTRODUCTION TO STATISTICAL METHODS.** 4 degree credits, \$Soc 3801. \$62.

The data of psychology and their statistical analysis. Univariate and bivariate descriptive statistics, principles of estimation and hypothesis testing. Examples from differential and experimental psychological research. (Prereq 1001 or equiv)

Fall Qtr Sec 1 Th—6:20-8:50, AndH 250

Spring Qtr Sec 2 Th—6:20-8:50, BlegH 130

**Psy 3911 PERSONALITY AND RELIGION.** 4 degree credits, \$62. (♦\$31) (IS)

Topical approach to the study of religious behavior. Areas covered include guilt, alienation, transcendence, altered states of consciousness, impulse control, conscience, values and beliefs, symbolic behavior, self-actualization, psychopathology, and the psychological interpretation of religious scriptures. (Prereq 1001 or 1911 or §)

Spring Qtr Sec 1 T—6:20-8:50, FolH 308, Bradshaw

Symbols, abbreviations, off-campus class locations begin on page 401.



**Psy 3960 TOPICS IN PSYCHOLOGY: INTRODUCTION TO BEHAVIOR ANALYSIS.** 4 degree credits each quarter, \$62 each quarter.

An introduction to principles of behavior analysis and therapy. Surveys of behavioral approaches to assessment and intensively discusses behavioral intervention principles and techniques. The last half of the course will deal with applications of behavior modification and applications of therapeutic methods for an array of client populations, including adult mental health, emotionally disturbed children, developmental disability, chemical dependency and study skills. (Prereq 1001 or § for Fall Qtr; Fall Qtr for Winter Qtr; Winter Qtr for Spring Qtr)

**Fall Qtr** Sec 1 **W**—3:30-6, WuH 130

**Winter Qtr** Sec 2 **M**—3:30-6, WuH 230

**Spring Qtr** Sec 3 **T**—3:30-6, WuH 130

**Psy 3970 DIRECTED STUDIES: PRACTICUM.** 4 degree credits each quarter, \$62 each quarter.

Practical experience applying behavioral intervention techniques and principles in at least three applied settings. Practicum experiences must be arranged with participating faculty members, and typically will involve a minimum of eight hours of practicum work, plus one to two hours of supervisory contact with an instructor. Practicum experience is available in adult mental health, emotionally disturbed children, developmental disability, chemical dependency and study skills. For assignment to a faculty member, contact Prof. Travis Thompson, coordinator of the Behavior Analyst Certificate Program, 628 Diehl Hall, 373-5033. Students must have a directed studies form signed by instructor. Special term dates must be indicated on this form. (Prereq 13960 or 12 in 3960 for Fall Qtr; Fall Qtr 3970 for Winter Qtr; Winter Qtr 3970 for Spring Qtr)

**Fall Qtr** Sec 1 **Arr.**

**Winter Qtr** Sec 2 **Arr.**

**Spring Qtr** Sec 3 **Arr.**

**Psy 5054 PSYCHOLOGY OF LANGUAGE.** 4 degree credits, \$68.

The theories and experimental evidence involved in past and present conceptions of psychology of language. (Prereq 3011, except for students in Honors sequence and grads. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 **Th**—6:20-8:50, WuH 230

**Psy 5105 THE ANALYTICAL PSYCHOLOGY OF C.G. JUNG.** 4 degree credits, \$68. (♦\$34)

Major Jungian psychological theories: extroversion-introversion, function types, complexes, ego, persona, shadow, animus, anima, self, personal and collective unconscious, symbolism, psychic energy, individuation, dream interpretation, psychotherapy. Relevant empirical research and clinical material. (Prereq 3101 or 5101 of §. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 **W**—6:20-8:50, NH 213, Mattoon

**★Psy 5106 SEMINAR: ADVANCED ANALYTICAL PSYCHOLOGY.** 4 degree credits, \$68.

Critical evaluation of selected topics of the psychological theories developed by C. G. Jung. Student papers. (Prereq 5105 or equiv. Limited to 12 students. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 **W**—6:20-8:50, NH 209A, Mattoon

**★Psy 5141 PSYCHOLOGY OF WOMEN.** 4 degree credits, \$68.

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)

**Fall Qtr** Sec 1 **W**—6:20-8:50, ForH 115

(See also Women's Studies; and Continuing Education for Women, page 293)

Symbols, abbreviations, off-campus class locations begin on page 401.

**Psy 5501 VOCATIONAL PSYCHOLOGY.** 4 degree credits, \$68.

Individual differences analysis of the work personality and the work environment; vocational development and vocational choice; work adjustment; work motivation and performance; work satisfaction and satisfactoriness; psychological problems connected with work. (Prereq 3801 or equiv. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 **W**—6:20-8:50, ForH 130

**Psy 5701 PERSONNEL AND INDUSTRIAL PSYCHOLOGY.** 4 degree credits. \$68. (◆\$34)

Application of principles of individual differences and psychological measurement to problems of recruiting, selecting, evaluating, and training members of ongoing organizations. Job behavior description, performance measurement, selection and placement strategies, minority group employment, measurement of job satisfaction or  $\bar{x}$ . Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 **Th**—6:20-8:50, WuH 130

(See also Industrial Relations)

**★Psy 5705 ENGINEERING PSYCHOLOGY.** 4 degree credits, \$68.

Study of human capabilities and limitations as they affect environment, work space and equipment. (Prereq 1005, 3801. Limited to 25 students. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 **W**—4-6:30, LindH 315, Kanarick

**Psy 5751 PSYCHOLOGY OF ADVERTISING.** 4 degree credits, \$Jour 5251, \$68.

Psychological analysis of the basic principles underlying advertising and selling. Consumer research is stressed. Research techniques for investigating advertising problems and the analysis of consumer wants are considered in detail. Meets concurrently with Jour 5251. (Prereq 1001. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 **W**—6:20-8:50, WuH 230, Jones

For information on non-credit workshops or conferences in psychology, please contact the Department of Conferences, Registrar, Nolte Center for Continuing Education; telephone 373-3151.

## public affairs (PA)

(See also Public Policy; and Urban Studies)

*Dean E. Abrahamson, Professor of Public Affairs*  
*John S. Adams, Professor of Public Affairs and Geography*  
*Nancy N. Anderson, Associate Professor of Public Affairs*  
*John E. Brandl, Professor of Public Affairs*  
*Willard W. Cochrane, Professor of Agricultural Economics*  
*Harold W. Chase, Professor of Political Science*  
*Thomas Dewar, Assistant Professor of Public Affairs*  
*Robert C. Einsweiler, Lecturer in Public Affairs*  
*Donald Geesaman, Professor of Public Affairs*  
*Michael E. Gleeson, Assistant Professor of Public Affairs*  
*Jay Greenberg, Research Fellow for Public Affairs*  
*Walter W. Heller, Regents Professor of Economics*  
*James L. Hetland, Professor of Public Affairs and Law*  
*Stephen Hoenack, Associate Professor of Public Affairs*  
*James E. Jernberg, Associate Professor of Public Affairs*  
*Martin H. Kreiger, Assistant Professor of Public Affairs*

Symbols, abbreviations, off-campus class locations begin on page 401.

Robert T. Kudrle, Assistant Professor of Public Affairs  
 G. Theodore Mitau, Visiting Professor  
 Arthur Naftalin, Professor of Public Affairs  
 George Warp, Professor of Public Affairs

**PA 3011 ADMINISTRATION.** 4 degree credits, \$62.

**new**

Theory and practice of administration. The administrative process; administrative theory; administrative behavior. (No prereq)

**Fall Qtr** Sec 1 T—7-9:30, BlegH 150, Warp

**PA 3121 INTRODUCTION TO PUBLIC INTEREST RESEARCH.** 4 degree credits, \$62 plus \$5 special fee. Total \$67. (♦\$31 plus \$5 special fee. Total \$36)

◆

Introductory survey of public interest activities, particularly as they relate to environmental, consumer and public health issues. Brief description of public interest law and case studies of major local and national public issues. (No prereq)

**Fall Qtr** Sec 1 M—6:20-8:50, BlegH 235, Abrahamson

**PA 3151 INTRODUCTION TO ENERGY POLICY.** 4 degree credits, \$5151. \$62 plus \$5 special fee. Total \$67. (♦\$31 plus \$5 special fee. Total \$36)

◆

Analysis of what has come to be called the "energy crisis." Basic data on energy supply and demand, alternative energy sources, energy conservation possibilities, environmental and social implications of alternative policies. Particular attention given to current energy policy issues. (No prereq. Meets concurrently with 5151)

**Winter Qtr** Sec 1 M—6:20-8:50, BlegH 145, Abrahamson

**PA 5151 ENERGY AND ENERGY POLICY.** 4 degree credits, \$68 plus \$5 special fee. Total \$73.

Fuel and energy supply and demand; environmental, social and economic implications of alternative energy policies; means to affect changes in use patterns; political and institutional factors; relations of energy policies to economic, foreign and environmental policies. (No prereq. Meets concurrently with 3151; additional research. Qualified students may register for graduate credit at the University of Minnesota.)

**Winter Qtr** Sec 1 M—6:20-8:50, BlegH 145, Abrahamson

(See other environmental concerns courses, page 318)

**PA 5161 TECHNOLOGY PLANNING.** 4 degree credits, \$68 plus \$5 course fee. Total \$73.

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 10, Geesaman

**PA 5319 INTERGOVERNMENTAL RELATIONS.** 4 degree credits, \$68.

**new**

Examination and analysis of the evolution of intergovernmental relations in the United States and of special administrative and fiscal problems and issues—with particular attention to the fields of human resources and services. (Prereq #. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 T—6:20-8:50, BlegH 330, Jernberg

**PA 8251, 8252, 8253 PUBLIC AFFAIRS WORKSHOP.** Cr arr. \$23 per credit.

(Prereq †. Qualified students may register for graduate credit.)

**new**

<b>Fall Qtr</b>	Sec 1	T—7-9, SocSci 860, Mitau
<b>Winter Qtr</b>	Sec 2	T—7-9, SocSci 860, Mitau
<b>Spring Qtr</b>	Sec 3	T—7-9, SocSci 860, Mitau

**PA 8311 LEGAL ENVIRONMENT OF PUBLIC ADMINISTRATION.** 3 degree credits, \$69.  
Survey of concepts, procedures, and other aspects of public law which are of particular concern to public administration. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 T—7:15-9, SocSci 860, Warp

**PA 8315 PUBLIC MANPOWER POLICY.** 3 degree credits, \$69.  
Analysis of the major issues and problems of policy and management concerning the organization and operation of public manpower systems. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 T—7:15-9, BlegH 230, Warp

*The following are day school classes in Public Affairs in which Extension students may register. Registration for these is the same as for Extension classes. For course descriptions, see the current College of Liberal Arts Bulletin available from the Bulletin & Service Bureau (373-2153) room B-3 Morrill Hall.*

**★PA 3011 ADMINISTRATION.** 4 degree credits, \$62.

(No prereq. A joint Day/Extension class limited to 8 Extension students [plus day school registrants].)

<b>Fall Qtr</b>	Sec 2	<b>MWF—10:15 a.m.-11, AndH 370, Warp</b>
<b>Spring Qtr</b>	Sec 3	<b>MWF—11:15 a.m.-12, ForH 155, Warp</b>

**★PA 3101 INTRODUCTION TO PUBLIC AFFAIRS.** 4 degree credits, \$62.

(No prereq. A joint Day/Extension class limited to 8 Extension students [plus day school registrants].)

<b>Spring Qtr</b>	Lect	<b>TTh—9:45 a.m.-11, AndH 270, Naftalin</b>
	Sec 1	<b>M—10:15 a.m.-11, BlegH 105</b>
	Sec 2	<b>W—10:15 a.m.-11, BlegH 105</b>
	Sec 3	<b>F—10:15 a.m.-11, BlegH 105</b>
	Sec 4	<b>M—9:15 a.m.-10, BlegH 210</b>
	Sec 5	<b>W—9:15 a.m.-10, BlegH 210</b>
	Sec 6	<b>F—9:15 a.m.-10, BlegH 210</b>

**★PA 3970 DIRECTED STUDY.** Credits arr., \$15.50 per credit.

(Prereq †. A joint Day/Extension class limited to 8 Extension students [plus day school registrants].)

<b>Fall Qtr</b>	Sec 1	<b>Arr.</b>
<b>Winter Qtr</b>	Sec 2	<b>Arr.</b>
<b>Spring Qtr</b>	Sec 3	<b>Arr.</b>

**★PA 5121 PUBLIC INTEREST RESEARCH AND PRACTICE.** 4 degree credits, \$68.

(Prereq †. A joint Day/Extension class limited to 8 Extension students [plus day school registrants]. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 **TTh—8:15 a.m.-10, BlegH 335, Abrahamson**

**★PA 5151 ENERGY AND ENERGY POLICY.** 4 degree credits, \$68.

(Prereq †. A joint Day/Extension class limited to 8 Extension students [plus day school registrants]. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 2 **TTh—8:15 a.m.-10, BlegH 115**

day/extension classes

Symbols, abbreviations, off-campus class locations begin on page 401.

**★PA 5152 TOPICS IN ENERGY POLICY.** 4 degree credits, \$68.

(Prereq †. A joint Day/Extension class limited to 8 Extension students [plus day school registrants]. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 **TTh**—11:15 a.m.-1, BlegH 115, Abrahamson, Geesaman

**★PA 5161, 5162 TECHNOLOGY PLANNING I, II.** 4 degree credits each quarter. \$68 plus \$5 course fee. Total \$73 each quarter.

(Prereq † for 5161, 5161 for 5162. A joint Day/Extension class limited to 8 Extension students [plus day school registrants]. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** **5161** Sec 2 **TTh**—1:15-3, BlegH 335, Geesaman

**Winter Qtr** **5162** Sec 3 **TTh**—1:15-3, BlegH 360, Geesaman

**★PA 5181 POLICY TOPICS IN COMMUNICATIONAL AND INFORMATIONAL TECHNOLOGIES.** 3 degree credits, \$51.

(Prereq †. A joint Day/Extension class limited to 8 Extension students [plus day school registrants]. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 **WF**—1:15-3, SocSci 850, Geesaman, Dewar

**★PA 5301 THE MULTINATIONAL CORPORATION.** 4 degree credits, \$68.

(Prereq Econ 1001, 1002 or equivalent. A joint Day/Extension class limited to 8 Extension students [plus day school registrants]. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 **TTh**—1:15-3, BlegH 430, Kudrle

**★PA 5401 DEVELOPMENT ADMINISTRATION.** 4 degree credits, \$68.

(No prereq. A joint Day/Extension class limited to 8 Extension students [plus day school registrants]. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 **MWF**—10:15 a.m.-11, BlegH 245, Warp

**★PA 5502 LOCAL ADMINISTRATION.** 4 degree credits, \$68.

(No prereq. A joint Day/Extension class limited to 8 Extension students [plus day school registrants]. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 **TTh**—10:15 a.m.-11:30, BlegH 245, Gleeson

**★PA 5505 HOUSING POLICY.** 4 degree credits, \$68.

(Prereq †. A joint Day/Extension class limited to 8 Extension students [plus day school registrants]. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 **MWF**—11:15 a.m.-12, BlegH 225, Gleeson

**★PA 5550 PLANNING PROSEMINAR.** 2 degree credits, \$34.

(Prereq †. A Joint Day/Extension class limited to 8 Extension students [plus day school registrants]. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 **M**—8:15 a.m.-10, BlegH 155, Einsweiler

Sec 2 **T**—9:15 a.m.-11, BA 136, Krieger

Sec 3 **W**—12:15-2, BA 160

**Winter Qtr** Sec 1 **M**—8:15 a.m.-10, SocSci 860, Einsweiler

Sec 2 **W**—8:15 a.m.-10, SocSci 860

Sec 3 **Th**—11:15 a.m.-1, SocSci 860

Sec 4 **F**—1:15-3, SocSci 860, Adams

**Spring Qtr** Sec 1 **M**—8:15 a.m.-10, BlegH 260

Sec 2 **M**—1:15-3, SocSci 860

**★PA 5601 PLANNING THEORY SEMINAR.** 4 degree credits, \$68.

(Prereq †. A Joint Day/Extension class limited to 8 Extension students [plus day school registrants]. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 **MWF**—10:15 a.m.-12, SocSci 860, Krieger

- ★**PA 5602 PLANNING THEORY SEMINAR.** 4 degree credits, \$68.  
 (Prereq ‡. A Joint Day/Extension class limited to 8 Extension students [plus day school registrants]. Qualified students may register for graduate credit at the University of Minnesota)  
**Spring Qtr** Sec 1 **MW**—10:15 a.m.-12, SocSci 860, Krieger
- ★**PA 5691 COMPARATIVE SERVICE ORGANIZATIONS.** 3 degree credits, \$51.  
 (Prereq ‡. Students must have instructor's written permission to register. A Joint Day/Extension class limited to 8 Extension students [plus day school registrants]. Qualified students may register for graduate credit at the University of Minnesota)  
**Winter Qtr** Sec 1 **Th**—9:15 a.m.-11, BlegH 245, Dewar
- ★**PA 8121 POLICY PROCESS II.** 3 degree credits, \$69.  
 (Prereq ‡. A joint Day/Extension class limited to 8 Extension students. Qualified students may register for graduate credit at the University of Minnesota.)  
**Winter Qtr** Sec 1 **MTh**—3:15-5, BlegH 225, Abrahamson
- ★**PA 8201 POLICY ANALYSIS I.** 3 degree credits, \$69.  
 (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, BlegH 415, Brandl, Kudrle
- ★**PA 8202 POLICY ANALYSIS II.** 3 degree credits, \$69.  
 (Prereq ‡. A joint Day/Extension class limited to 8 Extension students. Qualified students may register for graduate credit at the University of Minnesota.)  
**Winter Qtr** Sec 1 **TF**—3:15-5, BlegH 225, Hoenack
- ★**PA 8204 THE PUBLIC ECONOMY.** 3 degree credits, \$69.  
 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, BlegH 335, Heller
- ★**PA 8206 POLICY ANALYSIS III.** 3 degree credits, \$69.  
 (A joint Day/Extension class limited to 8 Extension students. Qualified students may register for graduate credit at the University of Minnesota.)  
**Spring Qtr** Sec 1 **TTh**—1:15-3, BlegH 225, Dewar
- ★**PA 8210 POLICY PROCESS III.** 3 degree credits, \$69.  
 (Prereq ‡. A joint Day/Extension class limited to 8 Extension students. Qualified students may register for graduate credit at the University of Minnesota.)  
**Spring Qtr** Sec 1 **MW**—3:15-5, BlegH 225, Gleeson
- ★**PA 8216 POLICY PROCESS I.** 3 degree credits, \$69.  
 (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 **MW**—3:15-5, BlegH 435, Naftalin
- ★**PA 8220 PUBLIC BUDGETING.** 4 degree credits, \$92.  
 (Prereq ‡. Δ joint Day/Extension class limited to 8 Extension students [plus day school registrants]. Qualified students may register for graduate credit at the University of Minnesota)  
**Fall Qtr** Sec 1 **TTh**—12:45-2, BlegH 350, Jernberg
- ★**PA 8251, 8252, 8253 PUBLIC AFFAIRS WORKSHOP.** Credits arr., \$23 per credit.  
 (Prereq ‡. A joint Day/Extension class limited to 8 Extension students [plus day school registrants]. **Different topic each section.** Qualified students may register for graduate credit at the University of Minnesota)  
**Fall Qtr** **8251** Sec 4 **W**—8:15 a.m.-10, BA 128, Brandl  
 Sec 5 **M**—12:15-2, BlegH 360, Patton  
 Sec 6 **M**—12:15-2, BA 128

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- Winter Qtr 8252 Sec 7 F—11:15 a.m.-1, BA 130, Brandl
- Sec 8 M—12:15-2, BA.735, Patton
- Sec 9 T—8:15 a.m.-10, BA 735
- Sec 10 T—12:15-2, BA 130, Jernberg
- Sec 11 M—12:15-2, BA 130, Greenberg
- Sec 12 Every other Sa—10 a.m.-1, SocSci 860, Whiteside
- Spring Qtr 8253 Sec 13 F—11:15 a.m.-1, BA 130, Brandl
- Sec 14 M—12:15-2, BA 130, Patton
- Sec 15 T—8:15 a.m.-10, BA 735
- Sec 16 Th—8:15 a.m.-10, BA 130, Jernberg

★PA 8321 **INTERGOVERNMENTAL ADMINISTRATIVE RELATIONS.** 3 degree credits, \$69.  
 (Prereq §. A joint Day/Extension class limited to 8 Extension students [plus day school registrants]. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 W—1:15-3, BA 128, Jernberg

★PA 8330 **INFORMATION AND INCENTIVES FOR IMPROVED DECISION MAKING IN BUREAUS.** 3 degree credits, \$69.

(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 W—11:15 a.m.-1, SocSci 860, Hoenack

★PA 8403 **SEMINAR: COMPARATIVE PUBLIC ADMINISTRATION.** 3 degree credits, \$69.  
 (Prereq §. A joint Day/Extension class limited to 8 Extension students [plus day school registrants]. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 Th—5:15-7, SocSci 860, Warp

★PA 8410 **AGRICULTURAL DEVELOPMENT PLANNING.** 3 degree credits, \$69.  
 (Prereq §. A joint Day/Extension class limited to 8 Extension students [plus day school registrants]. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 Th—10:15-12, SocSci 307, Cochrane

★PA 8511 **LAW AND URBAN AFFAIRS.** 3 degree credits, \$69.  
 (Prereq §. A joint Day/Extension class limited to 8 Extension students [plus day school registrants]. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 M—4:15-6, BlegH 260, Hetland

★PA 8521 **DEVELOPMENT MANAGEMENT SYSTEMS.** 3 degree credits, \$69.  
 (Prereq §. A joint Day/Extension class limited to 8 Extension students. Qualified students may register for graduate credit at the University of Minnesota.) Scheduled for Spring Quarter.

★PA 8525-8526-8527 **SEMINAR IN URBAN PUBLIC POLICY.** 3 degree credits each quarter, \$69 each quarter  
 (Prereq § for 8525, 8525 for 8526; 8526 for 8527. A joint Day/Extension class limited to 8 Extension students. Qualified students may register for graduate credit at the University of Minnesota.)

Fall Qtr 8525 Sec 1 W—9:15 a.m.-12, BlegH 350, Naftalin

Winter Qtr 8526 Sec 2 W—9:15 a.m.-12, BlegH 350, Naftalin

Spring Qtr 8527 Sec 3 W—9:15 a.m.-12, BlegH 340, Naftalin

★PA 8531 **PLANNING IN THE POST-INDUSTRIAL SOCIETY.** 3 degree credits, \$69.  
 (Prereq §. A joint Day/Extension class limited to 8 Extension students [plus day school registrants]. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 M—1:15-3, SocSci 860, Krieger

day/extension classes

**PA 8601, 8602, 8603 ISSUES IN AGING.** 3 degree credits, \$69.  
 (Prereq †. A joint Day/Extension class limited to 8 Extension students [plus day school registrants]. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr 8601 Sec 1 F—12:15-2, BlegH 350, Whiteside**  
**Winter Qtr 8602 Sec 2 T—10:15 a.m.-12, SocSci 860, Anderson**  
**Spring Qtr 8603 Sec 3 M—12:15-2, SocSci 860, Patten**

**PA 8606 SEMINAR: AGING POLICY.** 3 degree credits, \$69.  
 (Prereq †. A joint Day/Extension class limited to 8 Extension students [plus day school registrants]. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr Sec 1 Sa (every other Sa)—10 a.m.-1, SocSci 860, Gold**

**PA 8610 SEMINAR: HEALTH CARE POLICY.** 3 degree credits, \$69.  
 (Prereq †. A joint Day/Extension class limited to 8 Extension students [plus day school registrants]. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr Sec 1 W—12:15-2, SocSci 860, Kudrle**  
**Spring Qtr Sec 2 W—12:15-2, SocSci 860, Kudrle, Anderson**

**★PA 8690 HUMAN SERVICE DELIVERY SYSTEMS.** 3 degree credits, \$69.  
 (Prereq †. A joint Day/Extension class limited to 8 Extension students. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr Sec 1 TTh—11:15 a.m.-1, BlegH 255, Anderson**

**★PA 8752 FIELD WORK.** 3 degree credits, \$69.  
 (Prereq †. A joint Day/Extension class limited to 8 Extension students. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr Sec 1 M—9:15 a.m.-11, SocSci 860, Dewar**

**★PA 8971, 8981, 8991 INDIVIDUAL READINGS, RESEARCH IN PUBLIC POLICY ANALYSIS, ADMINISTRATION.** Credits arranged. \$23 per credit each 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 8971 Sec 1 Arr.**  
**Winter Qtr 8981 Sec 2 Arr.**  
**Spring Qtr 8991 Sec 3 Arr.**

## public health (PubH)

(See also General College natural science courses)

*Daniel Anderson, Adjunct Assistant Professor, Chemical Dependency Counseling Program*

*Dennis A. Armstrong, Instructor and Director, Chemical Dependency Counseling Program*

*Donald Barber, Professor of Environmental Health*

*James Boen, Professor of Biometry and Chemical Dependency Counseling Program*

*G. Kenneth Gordon, Assistant Professor of Hospital and Health Care Administration*

*Velvi W. Greene, Professor of Environmental Health*

*Carl B. Heggstad, Professor of Anatomy*

*Richard O. Heilman, Assistant Professor of Psychiatry and Public Health*

*Walter H. Jopke, Assistant Professor of Environmental Health and Safety*

*James Kincannon, Associate Professor of Interdisciplinary Studies in Chemical Dependency and Clinical Associate Professor of Psychiatry and Psychology*

Symbols, abbreviations, off-campus class locations begin on page 401.



*Daniel McInerney, Health Law Consultant, Minnesota Department of Health*  
*William A. O'Brien, Clinical Associate Professor of Medicine and Associate Professor of Public Health*

*Harold J. Paulus, Professor of Environmental Health*

*Vincent C. Pletcher, Adjunct Instructor, Chemical Dependency Counseling Program*

*James Rothenberger, Instructor, Chemical Dependency Counseling Program*

*Gustave L. Scheffler, Assistant Professor of Environmental Health and Safety*

*Robert W. Schwanke, Assistant Professor of Public Health and Director, Interdisciplinary Studies and Associated Programs*

*Conrad P. Straub, Professor of Environmental Health*

**PubH 3001 PERSONAL AND COMMUNITY HEALTH.** 3 degree credits, \$3004. \$46.50. (IS)  
 Fundamental principles of health conservation and disease prevention. (No prereq)  
**Winter Qtr** Sec 1 T—7-9:30, Mayo 100, O'Brien

**PubH 3005 INTRODUCTION TO ANATOMY AND MEDICAL TERMINOLOGY.** 3 degree credits, \$46.50.  
 Presentation of a method of medical terminology by body systems; review of anatomy including the regions and systems of the body. (No prereq)

**Spring Qtr** Sec 1 T—6:30-8:30, Jach 74, Heggstad

(See also Anatomy; Physiology)

★**PubH 5009H HONORS COURSE: ISSUES AND CONTROVERSIES IN CONTEMPORARY HEALTH.** 3 degree credits. To be offered Spring Qtr 1978 and alternate years thereafter.

★**PubH 5010 INTERPERSONAL BEHAVIOR IN HEALTH ORGANIZATIONS.** 4 degree credits, \$HSU 5010, \$68.

Designed to assist the participant in observing, analyzing and interpreting behavior patterns in human service organizations. Topics covered include communication skills (listening, feedback, empathy, nonverbal cues); group behavior (agenda setting, decision making, leadership roles); conflict resolution (causes of conflict, strategies for working through conflict). (No prereq. A joint Day/Extension class limited to 5 Extension students. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 MW—4:15-6, HSUnitA 2-690, Gordon

★**PubH 5711 PUBLIC HEALTH LAW.** 4 degree credits, \$68.

Introductory course for those with little or no legal background. Basic concepts of the law, legislative process, legal cases for the existence and administration of public health programs. Legal aspects of current public health issues and controversies and the regulatory role of the government in the health services system. (Prereq Public Health student, baccalaureate degree or  $\pm$ . Limited to 40 students. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 M—6-9, HSUnitA 2-580, McInerney

(See also Family Planning Administration 5243, Topics in Family Planning.)

## chemical dependency courses

Your attention is called to the Chemical Dependency Counseling Certificate Program, page 383.

Registration forms for all courses (except 5032) offered by the Chemical Dependency Counseling Program (see page 383) are available *only* through the Chemical Dependency Counseling Program, School of Public Health, University of Minnesota, 5409 Powell Hall, Box 76, 500 Essex St., Minneapolis, Minnesota 55455. The

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application process must be completed by August 1 for Fall Quarter enrollment and by January 15 for Spring Quarter enrollment. To obtain a formal application or any further registration information, write to the above address or call the program office at 373-8175.

(See also Adult Psychiatry; and Industrial Relations courses in chemical dependency)

★PubH 3030 **FUNDAMENTAL ASPECTS OF DRUG ABUSE AND DEPENDENCY.** 3 degree credits, \$46.50.

Series of lectures with emphasis on the historical and cultural perspectives of drug use and abuse and the principles of pharmacology as applied specifically to the various classifications of mind altering chemicals. (Prereq advance application or †. Under special circumstances this course may be taken for graduate credit; check at time of application for admission. Requests for admission should be made to Dennis A. Armstrong, Program Director)

Fall Qtr Sec 1 T—6:30-9, MirdH 213  
Spring Qtr Sec 2 Th—6:30-9, MirdH 213

★PubH 3031 **THE DISEASE PROCESS AND SOCIAL IMPLICATIONS OF DRUG DEPENDENCY.** 3 degree credits, \$46.50.

Lectures and small group discussions with emphasis on the nature of drug dependency, the variety of treatment modalities and some of the legal and social problems related to drug dependency. (Prereq 3030 or †. Under special circumstances this course may be taken for graduate credit; check at time of application for admission. Requests for admission should be made to Dennis A. Armstrong, Program Director)

Winter Qtr Sec 1 T—6:30-9, Owre 111

★PubH 3032 **COUNSELING THE ALCOHOLIC AND OTHER DRUG DEPENDENT PERSONS.** 3 degree credits, \$46.50.

Lectures and small group discussions with emphasis on some basic individual, group and family counseling techniques as specifically related to drug abuse and its effects on all aspects of a person's life. (Prereq 3031 or †. Under special circumstances this course may be taken for graduate credit; check at time of application for admission. Requests for admission should be made to Dennis A. Armstrong, Program Director)

Fall Qtr Sec 1 Th—6:30-9, HSUnitA 2-520  
Spring Qtr Sec 2 T—6:30-9, Owre 111

★PubH 3034 **TOPICS IN ALCOHOL AND DRUG ABUSE.** 2-5 degree credits, \$15.50 a credit.

Selected readings in alcohol and drug abuse with discussion based on these readings. (Prereq †. Requests for admission should be made to Robert W. Schwanke, School of Public Health, 1305 Mayo, Box 197 Mayo, 412 Union St. S.E., Minneapolis, Minnesota 55455 or to Dennis A. Armstrong, Program Director)

★PubH 3035 **INTERNSHIP IN ALCOHOL AND DRUG ABUSE.** 3-12 degree credits, \$15.50 a credit.

A six-month (125 working days) rotating clinical internship in approved and affiliated institutions or agencies under professional supervision. (Prereq 3032 and †. Requests for admission should be made to the Internship Program Coordinator at 5400 Powell Hall)

★PubH 3036 **BASIC HELPING SKILLS.** 4 degree credits, \$62.

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 †. Requests for admission should be made to Dennis Armstrong, Program Director)

★PubH 3037 **CHEMICAL DEPENDENCY: A FAMILY ILLNESS.** 3 degree credits, \$46.50.

Lectures and small group discussions designed to increase the student's understanding and awareness of family dynamics and to develop strategies for including family members in the treatment and recovery process. (Prereq †. Under special

Symbols, abbreviations, off-campus class locations begin on page 401.

circumstances this course may be taken for graduate credit; check at time of application for admission. Requests for admission should be made to Dennis A. Armstrong, Program Director)

**★PubH 5013 INTERDISCIPLINARY TEAM TRAINING IN HEALTH SERVICES DELIVERY.** 3 degree credits, \$HSU 5001, 5300. \$51.

Basic elements of interpersonal and group communications. Interdisciplinary student team assignment involves individual and group analysis and critiquing of process used by selected community health services or health care delivery teams. Includes teams with a specific single disease or problem, complex socio-political health problems, broad primary care programs, and community problem-solving efforts. (Prereq †. A joint Day/Extension class limited to 24 Extension students from health or helping professions. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 W—6-8:45, HSUnitA 2-530, Schwanke

**Spring Qtr** Sec 2 W—6-8:45, HSUnitA 2-530, Schwanke

**PubH 5032 EDUCATIONAL ASPECTS OF DRUG USE AND ABUSE.** 3 degree credits, \$5033, 3033, Health 5400. \$51.

Basic background information on alcohol and other drugs and chemicals, with emphasis on curriculum concepts, teaching methodology, materials, and referral procedures appropriate for the elementary, junior, and senior high school. (Prereq education seniors, certified teachers, school nurses or †. Qualified students may register for graduate credit at the University of Minnesota.)

**Spring Qtr** Sec 1 W—6:30-9, HSUnitA 2-520, Rothenberger, Kincannon

**★PubH 5034 TOPICS IN ALCOHOL AND DRUG ABUSE.** 2-5 degree credits, \$17 a credit.

Selected readings in alcohol and drug abuse with discussion based on these readings. (Prereq advanced application or †. Requests for admission should be made to Professor Robert W. Schwanke [Public Health, 1305 Mayo, Box 197 Mayo, 412 Union Street S.E., University of Minnesota, Minneapolis 55455]. Qualified students interested in graduate credit should inquire at time of registration)

**★PubH 5036 GROUP COUNSELING IN CHEMICAL DEPENDENCY.** 3 degree credits, \$51.

Primary focus on the small group and the role it plays in the recovery process. Process variables in facilitating group interaction both in therapy and staff meetings are considered. (Prereq †. Requests for admission should be made to Dennis A. Armstrong, Program Director)

## environmental health courses

(See other environmental concerns courses, page 318)

**PubH 5151 ENVIRONMENTAL HEALTH.** 3 degree credits, \$51.

Methods for promoting man's health and comfort by controlling the environment. (Prereq †. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 T—7-9:30, Mayo 1250, Straub

**PubH 5159 SEMINAR: ENVIRONMENTAL HEALTH.** 1 degree credit. To be offered Spring Qtr 1978, and alternate years thereafter.

**PubH 5171 ENVIRONMENTAL MICROBIOLOGY.** 3 degree credits, \$51.

Survival, dissemination, transportation, and significance of microorganisms in the environment; application of principles to environmental health problems. Offered alternate years. (Prereq 5151, 5155; MicB 3101 or †. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 Time arr.

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**PubH 5181 INTRODUCTION TO AIR POLLUTION PROBLEMS.** 3 degree credits, \$51.

History, sources, controls, effects, surveys, legal aspects, and administration of air pollution programs. (Prereq §. Qualified students may register for graduate credit at the University of Minnesota).

**Fall Sem** Sec 1 **M**—6:20-8, Mayo 1250, Paulus

**PubH 5182 AIR POLLUTION CONTROLS AND SURVEYS.** 3 degree credits, \$51.

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, Mayo 1250, Paulus

**PubH 5201 MEASUREMENT AND APPLICATION OF IONIZING RADIATION.** 3 degree credits, \$51.

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 Winter Qtr, 1978 and alternate years thereafter.**PubH 5241 ENVIRONMENTAL HEALTH ASPECTS OF WATER SUPPLY.** 3 degree credits, \$51.

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 Spring Qtr 1978 and alternate years thereafter.

## 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 related courses in Public Affairs, History, Political Science, and Urban Studies)



## quantitative analysis (QA)

*Carl R. Adams, Associate Professor of Quantitative Analysis*

*John C. Anderson, Assistant Professor of Quantitative Analysis*

*James E. Carter, Research Director, Minnesota Energy Agency*

*Norman Chervany, Professor of Quantitative Analysis*

*Gary W. Dickson, Professor of Quantitative Analysis*

*Roger G. Schroeder, Associate Professor of Quantitative Analysis*

Symbols, abbreviations, off-campus class locations begin on page 401.

**★QA 1050 ELEMENTARY MANAGERIAL STATISTICS.** 4 degree credits, \$62 plus \$4 special fee. Total \$66.

Introduction to quantitative decision making. Probabilistic and statistical techniques in decision making, data analysis, and management information systems, e.g., laws of probability, sampling, estimation, and regression. (Prereq Math 1141, 1131 or equiv. Limited to 50 students)

- Fall Qtr**
  - Sec 1 **M**—5:30-8:50, AndH 330, Chervary
  - Sec 2 **T**—5:30-8:50, AndH 270
  - Sec 3 **W**—5-8:20, WCCO Radio Bldg 512, Mpls
  - Sec 4 **Th**—5:30-8:50, AndH 330
  - Sec 5 **Sa**—9 a.m.-12:20, AndH 270
- Winter Qtr**
  - Sec 6 **M**—5:30-8:50, AndH 350, Chervary
  - Sec 7 **T**—5:30-8:50, AndH 350
  - Sec 8 **W**—5:30-8:50, AndH 350
  - Sec 9 **Sa**—9 a.m.-12:20, AndH 350
- Spring Qtr**
  - Sec 10 **M**—5:30-8:50, AndH 350, Chervary
  - Sec 11 **T**—5:30-8:50, AndH 370
  - Sec 12 **W**—5-8:20, WCCO Radio Bldg 512, Mpls
  - Sec 13 **Sa**—9-12:20, AndH 350

**★QA 3053 QUANTITATIVE METHODS FOR ADMINISTRATION.** 4 degree credits, \$62.

Statistical estimation and prediction, statistical decision making, introduction to design of experiments, regression and correlation, and time series analysis. (Prereq 1050. Limited to 45 students.)



- Spring Qtr** Sec 1 **W**—6-9:20, BlegH 440, Chervary

**★QA 3055 INTRODUCTION TO MANAGEMENT SCIENCES (replaces OAM 3055).** 4 degree credits, \$62 plus \$4 course fee. Total \$66.

First course in the use of analytical approaches and techniques within business contexts. Emphasis on the role of mathematical models, statistical techniques related to data acquisition, and the use of computers and computer techniques in solving organizational problems. Examples will illustrate the use of both deterministic and stochastic models. Laboratory session will include problem solving and case analysis. (Prereq 1050, Math 1142 or equiv. Limited to 50 students.)

- Fall Qtr**
  - Sec 1 **M**—5:30-8:50, AndH 350, Schroeder
  - Sec 2 **T**—5:30-8:50, AndH 370
  - Sec 3 **W**—5:30-8:50, AndH 230
  - Sec 4 **Sa**—9 a.m.-12:20, AndH 350
- Winter Qtr**
  - Sec 5 **M**—5:30-8:50, AndH 210, Schroeder
  - Sec 6 **T**—5:30-8:50, AndH 250
  - Sec 7 **W**—5-8:20, WCCO Radio Bldg 512, Mpls
- Spring Qtr**
  - Sec 8 **M**—5:30-8:50, AndH 370, Schroeder
  - Sec 9 **T**—5:30-8:50, AndH 250
  - Sec 10 **W**—5:30-8:50, AndH 250



## real estate (RE)

(See also BLaw 0098C, Real Estate Law; and GC 3582, Legal Studies; Real Estate)

- Marcella Anderson, Realty Center, Inc.*
- Russell Brackett, Chase-Brackett Company*
- Gerald Carroll, Attorney, Wurst, Bundlie, Carroll & Crouch*

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**Sampson Child, Clifford R. Johnson & Associates**  
**Gary Elliott, Elliott Realty, Inc.**  
**John Elliott, Elliott Realty, Inc.**  
**Leslie Gensmer, Minneapolis Star and Tribune**  
**Richard Hafner, Northland Mortgage Company**  
**Ernest O. Hartwick, broker, Hartwick Realty, Inc.**  
**Arthur Helland, Vice President, Appraiser-Consultant—Retired V.P., Farmers & Mechanics Savings Bank**  
**Clifford Johnson, real estate appraisals, Clifford R. Johnson & Associates**  
**Wayne Johnson, Finance Records Dept., Hennepin County**  
**R. Wm. Krouse, Personal Development Assoc.**  
**Fred Kueppers, Jr., Attorney, Kueppers and Von Feldt**  
**John Larson, Commissioner of Securities**  
**Larry Laukka, The Sussel Company**  
**Mary Leslie, Lybrand, Ross Bros. and Montgomery**  
**Ray N. McCloughan, Minnesota State Highway Dept.**  
**Lawrence Melody, Northland Mortgage Company**  
**Linus F. Munger, Munger Insurance Agency**  
**Thomas C. Munger, Munger Insurance Agency**  
**Kenneth O. Parke, Thorpe Bros., Inc.**  
**Paul F. Resberg, broker, Variety Homes, Inc.**  
**Jack Rice, broker, The Rice Co.**  
**Bernard G. Rice, Executive Vice President, Greater Minneapolis Area Board of Realtors, Minnesota Association of Realtors**  
**Peter Rosko, Associate Professor of Finance and Insurance**  
**Howard Shenehon, Shenehon-Goodlund & Associates, Inc.**  
**Gerald Smedberg, broker, Smedberg & Associates**  
**Russell C. Smith, Russell Smith Associates, Inc.**  
**James Wadsworth, The Griffin Companies, Inc.**

The University of Minnesota cooperates with the 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.

Successful completion of RE 0001C and RE 0011C, Fundamentals of Real Estate Practice and Advanced Real Estate, meets the requirement of the Real Estate License Law of the State of Minnesota for 60 hours of approved study within two years of initial licensing as a salesperson. Each salesperson shall be required to complete both courses successfully. RE 0001C must be completed before RE 0011C. They may not be taken concurrently.

Further information regarding this course may be obtained by calling Continuing Business Education, 373-3680.

**\*RE 0001C FUNDAMENTALS OF REAL ESTATE PRACTICE.** 3 certificate credits, \$46.50.

The basics of various aspects of the real estate business—appraisal, property management, sales brokerage, financing, real estate investments, land development and preparation of essential contracts. A basic course: should be taken prior to other courses in real estate curriculum. Approved by the Commissioner of Securities pursuant to Minnesota statute section 82.22. **May not be taken concurrently with 0011C.** (No prereq. Limited to 75 students)

**Fall Qtr**      Sec 1    **Th—6-9, AndH 310, Rice**  
**Spring Qtr**    Sec 2    **W—6-9, AndH 310, Rice**

Symbols, abbreviations, off-campus class locations begin on page 401.

**RE 0004C REAL ESTATE APPRAISAL.** 3 certificate credits, \$46.50.

Primarily for the consideration of principles and practices in the valuation of residential real estate; the approaches to value, capitalization and depreciation, a case study, and summation and the appraisal report. Secondary consideration only to specialized income appraisal reports. (No prereq but real estate experience or RE 0001C is desirable)

**Spring Sem** Sec 1 Th—6:20-8, AndH 250, Rice

**RE 0006C REAL ESTATE FINANCING AND INSURANCE.** 3 certificate credits, \$46.50.

Kinds and types of insurance necessary and advisable to adequately cover property of all kinds, residential real estate financing—F.H.A., V.A., conventional contract for deed—determining degree of risk and extending the loan, sources of money available and procedures and policies of same. (No prereq)

**Fall Sem** Sec 1 T—6:20-8, AndH 310, Rice

**★RE 0011C ADVANCED REAL ESTATE.** 3 degree credits, \$46.50 plus \$10 special fee. Total \$56.50.

Advanced appraising, financing, marketing, real estate law; sale of special properties—condominiums, town houses, land; real estate advertising; real estate securities; state and federal taxation, real property taxation property insurance and customer communication. **May not be taken concurrently with 0001C.** Approved by the Commissioner of Securities pursuant to Minnesota Statute section 82.22. (Prereq RE 0001C or real estate experience. Limited to 75 students)

**Fall Qtr** Sec 1 M—6-9, AndH 310, Rice

**Spring Qtr** Sec 2 M—6-9, AndH 310, Rice

## recreation, park and leisure studies (Rec)

(School of Physical Education, Recreation, and School Health Education)

*Elizabeth A. Griffin, Instructor in Recreation, Park and Leisure Studies*

**★Rec 5300 FOUNDATIONS OF OUTDOOR EDUCATION.** 3 credits (maximum 12 cr) \$51.

Investigations of the philosophical, historical and educational foundations of outdoor education. (Prereq senior, 1520 or 5100 or ♯. Limited to 30 students. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 W—7:30-9:30, Cooke Hall 214, Griffin

**★Rec 5900 WORKSHOP: CONTEMPORARY ISSUES IN LEISURE SERVICES.** 3 credits (maximum 12 cr). \$51 plus \$5 lab fee. Total \$56.

In-depth exploration of contemporary issues emphasizing administrative and supervisory functions for recreation and allied professionals; individual offerings will focus on special issues and/or professional groups. An interdisciplinary approach to outdoor education concepts, ideas and experiences will be presented in a variety of settings. Emphasis will be placed on outdoor education leadership. Intended for school teachers, recreation leaders and college juniors, seniors and graduate students and adult education students. (Focus this offering: **Programming in Outdoor Education**.) (Limited to 25 students. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 W—5:30-8, The Nature Center,  
Hyland Lake Park Reserve, 8737 E Bush Lake Road,  
Bloomington (941-7993), Griffin

## religious studies (ReIS)

(See related courses on page 317)

*All Thomas Kraabel, Professor of Classics*

**ReIS 1032 RELIGIONS OF EAST ASIA.** 4 degree credits, SEAL 1032. To be offered 1977-78.

Symbols, abbreviations, off-campus class locations begin on page 401.

**ReIS 1035 INTRODUCTION TO CHRISTIANITY.** 4 degree credits. \$62. (◆\$31)

**new**

How to study Christianity. The place of the Bible. Central doctrines, rites, thinkers. History: the ancient Church, Orthodoxy, the Middle Ages, the Reformation, American Christianity. Present-day issues: survey, analysis, discussion. The Christianities of the Future. (No prereq)

Winter Qtr Sec 1 M—6:20-8:50, FolH 306, Kraabel

## **rhetoric (Rhet)**

(Technical Communication Program)

(See also Study Skills; General College and English Communications courses; and other study helps, page 305)

*James E. Connolly, Professor of Rhetoric*

*Richard W. Ferguson, Instructor in Rhetoric*

*Warren Y. Gore, Assistant Professor of Rhetoric*

*John F. Griffin, Lecturer in Rhetoric*

*James R. Holloway, Associate Professor of Rhetoric*

*Richard O. Horberg, Associate Professor of Rhetoric*

*William M. Marchand, Professor of Rhetoric*

*Starling W. Price, Professor of Rhetoric*

*Lyman K. Steil, Assistant Professor of Rhetoric*

**★Rhet 1147 EFFICIENT READING.** 3 degree credits in Business Administration, General College, the Institute of Technology, and Agriculture. \$46.50 plus \$2 special fee. Total \$48.50. (IS)

Designed for students, business, or professional people of average or above-average reading ability who wish to improve their reading speed and comprehension. Emphasizes reading techniques useful in achieving or maintaining scholastic or professional status. A suggested follow-up for PO 1001, How to Study. (No prereq. Limited to 30 students)

<b>Fall Qtr</b>	Sec 1	M—7-9:30, Sandburg JHS 211, Golden Valley, Holloway
	Sec 2	T—6:20-8:50, ForH 160, Price
	Sec 3	W—6:20-8:50, ForH 150, Horberg
	Sec 4	Th—6:20-8:50, ForH 115, Gore
<b>Winter Qtr</b>	Sec 5	M—6:20-8:50, ForH 160, Marchand
	Sec 6	T—6:20-8:50, ForH 160, Horberg
	Sec 7	W—6:20-8:50, Kellogg HS 111, Little Canada, Gore
<b>Spring Qtr</b>	Sec 8	M—6:20-8:50, ForH 120, Price
	Sec 9	T—7-9:30, Brooklyn Center HS 12, Horberg
	Sec 10	W—6:20-8:50, ForH 120, Marchand

**★Rhet 1226 PARLIAMENTARY PROCEDURE, LEADERSHIP, AND PARTICIPATION.** 3 degree credits, \$46.50. (IS)

Individual participation in the creation and development of a functioning organization using rules of parliamentary procedure as its basis for doing business. The history, theories, and processes of democratically-oriented organizations. (Prereq completion of rhetoric communication requirement. Limited to 25 students)

**Fall Qtr** Sec 1 Th—6:20-8:50, ForH 160, Connolly

**★Rhet 3551 PROFESSIONAL WRITING.** 4 degree credits. \$62.

Projects and reports in professional communication: the resume, application letter, interview; study of professional journals; the review of literature; specialized bibliographic tools; the feature article. (Prereq jr standing. Limited to 23 students)

**Fall Qtr** Sec 1 T—6:20-8:50, ForH 447, Griffin

Symbols, abbreviations, off-campus class locations begin on page 401.



★**Rhet 3562 SCIENTIFIC AND TECHNICAL WRITING.** 4 degree credits, \$62.

Methods of exposition in scientific and technical writing; types of reports; audience analysis; continuous practice in report writing. (Prereq jr standing. Limited to 23 students)

**Winter Qtr** Sec 1 T—6:20-8:50, ForH 170, Ferguson

(See also technical writing courses in English and in Informal Courses)

★**Rhet 5170 MANAGERIAL COMMUNICATIONS.** 4 degree credits, \$68.

Systematic analysis of communication techniques and procedures for the manager. Emphasis on manager's ability to achieve vertical and horizontal understanding and acceptance. Class activities include readings, guest speakers, and a term project. (No prereq. Limited to 25 students. May not be taken for graduate credit)

**Fall Qtr** Sec 1 W—6:20-8:50, ForH 447, Steil

★**Rhet 5257 SCIENTIFIC AND TECHNICAL PRESENTATIONS.** 4 degree credits, \$68.

Training for specific presentation situations related to technical or scientific topics. 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 make and evaluate technical and scientific presentations. Emphasis on seminar reports and professional conference papers. (Prereq 1222 and 3562 or 3551 or §. Limited to 25 students. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 W—6:20-8:50; HckrH 224, Connolly

**Rhet 5800 TRANSFER OF TECHNOLOGY.** 4 degree credits, \$68.

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. 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 required. (Prereq §)

**Fall Qtr** Sec 1 M—6:20-8:50, BioSci 12, Schuelke

## russian

(See Slavic and East European Languages)

## salesmanship

See Marketing; Journalism; and General College marketing sequence.

**Sal 0001C** Now GC 1053, **Selling Approaches and Techniques.** See page 153.

## scandinavian languages (Scan)

(See also IC 0039 Scandinavian Literature; and Hist 3273, Modern Scandinavia; and other ethnic study courses, page 300)

Symbols, abbreviations, off-campus class locations begin on page 401.

*William Mishler, Associate Professor of Scandinavian*  
*Göran Stockenström, Associate Professor of Scandinavian*  
*Börje Vähämäki, Assistant Professor of Scandinavian*

Language laboratory fees are charged for courses in which use of the lab is required or recommended. Cassette tapes are available to extension classes students on a take-home basis. Students can pick up tapes at the Learning Resources Center on the second floor of Walter Library or the second floor of Temporary South of Coffey on the St. Paul Campus. Students must present a fee statement when checking out tapes. Rental costs are covered by the special fees paid with tuition.

Learning Resource Center hours are: 8 a.m.-10 p.m., Monday-Thursday; 8 a.m.-6 p.m., Friday; 9 a.m.-6 p.m., Saturday; Sunday hours being planned.

The following non-language classes may be applied toward the CLA foreign language requirement, Route II for Danish, Finnish, Norwegian, Swedish (see page 359): Arth 5645; Scan 1504, 5501, 5601.

**Scan 1504 SCANDINAVIAN IMMIGRANT CULTURE AND ITS BACKGROUND.** 4 degree credits, \$62. (◆\$31)

◆ A study of the background, reasons and nature of Scandinavian immigration to America, with special study of Scandinavian culture in the Midwest. May be applied toward the CLA foreign language requirement, Route II for Danish, Finnish, Norwegian, Swedish (see page 359). (No prereq)

Winter Qtr Sec 1 Th—6:20-8:50, FolH 304, Stockenström

**Scan 3604 FINNISH LITERATURE IN TRANSLATION.** 4 degree credits, \$62. (◆\$31)

◆ Major literary works from the Middle Ages to the present. (No prereq)

**new**

Fall Qtr Sec 1 M—6:20-8:50, FolH 205, Vähämäki

**Scan 3670 TOPICS: CHILDREN'S LITERATURE IN SCANDINAVIA.** 4 degree credits, \$5670. \$62. (◆\$31)

◆ Meets concurrently with 5670. (No prereq)

**new**

Spring Qtr Sec 1 W—6:20-8:50, FolH 207, Stockenström

**Scan 5501 SCANDINAVIAN MYTHOLOGY.** 4 degree credits, \$68. (◆\$34)

◆ Scandinavian myths based on the Poetic Edda and the Prose Edda (readings in translation). (No prereq. May be applied toward the CLA foreign language requirement, Route II for Danish, Finnish, Norwegian, Swedish [see page 359]. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 W—6:20-8:50, FolH 207

**Scan 5601 INGMAR BERGMAN IN THE CONTEXT OF MODERN SCANDINAVIAN LITERATURE.** 4 degree credits, \$68 plus \$5 special fee. Total \$73. (◆\$34 plus \$5 special fee. Total \$39)

◆ Viewing of several of Ingmar Bergman's films, readings of film scripts and discussion. May be applied toward the CLA foreign language requirement, Route II for Danish, Finnish, Norwegian, Swedish (see page 359). (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 W—6:20-8:50, MNH Aud, Mishler

(See other film courses, page 291)

**Scan 5670 TOPICS: CHILDREN'S LITERATURE IN SCANDINAVIA.** 4 degree credits each quarter, \$3670. \$68 each quarter.

**new**

◆ Meets concurrently with 3670. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 W—6:20-8:50, FolH 202, Stockenström

Symbols, abbreviations, off-campus class locations begin on page 401.

## finnish (Fin)

**Fin 1101-1102 BEGINNING FINNISH.** 5 degree credits each semester, \$77.50 each semester.) (IS 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 or § for 1102)

**Fall Sem 1101** Sec 1 T—6:20-9:05, FolH 208, Vähämäki

**Spring Sem 1102** Sec 2 T—6:20-9:05, FolH 208, Vähämäki

**Fin 1103-1104 INTERMEDIATE FINNISH.** 5 degree credits. **To be offered 1977-78.**

## norwegian (Nor)

**Nor 1103-1104 INTERMEDIATE NORWEGIAN.** 5 degree credits each semester, \$77.50 plus \$5 course fee. Total \$82.50 each semester.

(Prereq 1102 or § for 1103; 1103 or § for 1104)

**Fall Sem 1103** Sec 1 Th—6:20-9:05, FolH 305, Mishler

**Spring Sem 1104** Sec 2 Th—6:20-9:05, FolH 305, Mishler

## swedish (Swed)

**Swed 1101-1102 BEGINNING SWEDISH.** 5 degree credits each semester, \$77.50 plus \$5 course fee. Total \$82.50 each semester. (IS 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 302, Stockenström

**Spring Sem 1102** Sec 2 M—6:20-9:05, FolH 302, Stockenström

**Swed 1103-1104 INTERMEDIATE SWEDISH.** 5 degree credits. **To be offered 1977-78.**

## school health education (Hlth)

(School of Physical Education, Recreation and School Health Education)

*Lyle E. Lewis, Lecturer in Health Education*

*Frank C. Thissen, Lecturer in Health Education*

★**Hlth 5100 DRIVER EDUCATION I.** 4 degree credits, \$68 plus \$12 special fee. Total \$80.

Materials and methods for driver education; building a plan for driver education for a specific school; behind-the-wheel training. Valid Minnesota driver's license required. **May not be taken S-N.** (Additional time arranged for behind-the-wheel instruction.) (No prereq. Limited to 32 students. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 W—7-10, Richfield HS 116, Lewis

★**Hlth 5101 DRIVER EDUCATION II.** 4 degree credits, \$68 plus \$12 special fee. Total \$80.

See course description for Hlth 5100. Second of 3 courses to meet Minnesota certification requirements after September 1, 1966. **May not be taken S-N.** (Prereq 5100. Limited to 32 students. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 W—7-10, Richfield HS 116, Lewis

★**H1th 5130 SAFETY EDUCATION.** 4 degree credits, \$68.

Scope and nature of the accident problem in our society; study of curricular areas leading to accident prevention. **May not be taken S-N.** (Prereq senior. Limited to 32 students. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 T—7-10, Norrish 201, Thissen

★**H1th 5602 THE DRIVER SIMULATOR.** 4 degree credits, \$68.

Working with the simulator program to improve, expand, and reduce the cost of conventional driver education. **May not be taken S-N.** (Prereq 5100. Limited to 35 students. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 W—7-10, Richfield HS 116, Lewis

## psychology in the schools training programs (SchP)

*V. Lois Erickson, Assistant Professor in Psychoeducational Studies*

**SchP 5550 SEMINAR: PSYCHOLOGICAL EDUCATION.** 3 degree credits, \$51.

Review of curriculum programs in psychological/affective education including achievement training, sensitivity groups, psychological and moral education. Not intended to meet certification requirements in school psychology. For teachers and psychologists in the schools whose professional work includes applications of psychology to the classroom setting. Emphasis will be on applications of developmental psychology to curriculum programs in affective education. Included will be programs in achievement training, ego development, and moral education. (Prereq 15650 and §. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 W—6-8:30, Elth N508, Erickson

**Spring Qtr** Sec 2 W—6-8:30, Elth N508, Erickson

**new**

## secondary education (SeEd)

(Department of Curriculum and Instruction)

*Richard N. Hey, Professor and Head of Family Social Science*

*Betty W. Robinett, Professor of Linguistics*

**SeEd 5112 FAMILY LIFE EDUCATION.** 3 degree credits, \$51.

Sources and types of materials available; techniques of family life education, preparation and evaluation of instructional materials. **May not be taken S-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 M—6:20-8:50, Bu 123, Hey

**SeEd 5396 METHODS OF ENGLISH AS A SECOND LANGUAGE.** 4 degree credits, \$Ling 5721. \$68.

Principles of selection, sequencing, and presentation of instructional materials at various grade levels. Linguistics applied to the teaching of English as a second language. (Prereq Ling 5001 or §. Meets concurrently with Ling 5721. **May not be taken S-N.** Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 T—6:20-8:50, FolH 406

## slavic and east european languages

(See other ethnic studies courses, page 300)

Symbols, abbreviations, off-campus class locations begin on page 401.

*Irina Corten, Assistant Professor of Slavic Languages*  
*Adele Donchenko, Associate Professor of Slavic Languages*  
*Leonard A. Polakiewicz, Instructor in Slavic Languages*  
*Tatiana Prokopov, Professor of Slavic Languages*

Language laboratory fees are charged for courses in which use of the lab is recommended or required. Cassette tapes are available to extension classes students on a take-home basis. Students can pick up tapes at the Learning Resources Center on the second floor of Walter Library or the second floor of Temporary South of Coffey on the St. Paul Campus. Students must present a fee statement when checking out tapes. Rental costs are covered by the special fees paid with tuition.

Learning Resource Center hours are: 8 a.m.-10 p.m., Monday-Thursday; 8 a.m.-6 p.m., Friday; 9 a.m.-6 p.m., Saturday; Sunday hours being planned.

## polish (Plsh)

**Plsh 1101-1102 BEGINNING POLISH.** 5 degree credits, \$77.50 plus \$5 course fee. Total \$82.50. (IS 1101)

Essentials for speaking, understanding, and reading basic Polish. (No prereq for 1101, 1101 for 1102)

**Fall Sem 1101** Sec 1 T—6:20-9:05, EltH 350, Polakiewicz

**Spring Sem 1102** Sec 2 T—6:20-9:05, EltH 350, Polakiewicz

## slavic (Slav)

**Slav 1501 THE SLAVIC HERITAGE.** 4 degree credits, \$62. (♦\$31)

Traditions and culture of the Slavic world and of Slavic ethnic groups in America. (No prereq. May be applied toward the CLA foreign language requirement, Route II for Russian [see page 359])

**Fall Qtr** Sec 1 W—6:20-8:50, FolH 204, Donchenko

## russian (Russ)

(See also Hist 5264, Modern Russia; and Geog 3181, Soviet Union; Pol 5443, Government and Politics in the Soviet Union)

The following non-language classes may be applied toward the CLA foreign language requirement, Route II (see page 359): Hist 5264, 5265, 5266; Geog 3181; Russ 5203, 5404, 5407.

**Russ 1101-1102 BEGINNING RUSSIAN.** 5 degree credits each semester, \$77.50 plus \$5 course fee. Total \$82.50 each semester.

Grammar, pronunciation, reading, and practice in speaking. (No prereq for 1101; 1101 or 1 for 1102)

**Fall Sem 1101** Sec 1 T—6:20-9:05, FolH 205, Donchenko

**Spring Sem 1102** Sec 2 T—6:20-9:05, FolH 205, Donchenko

**Russ 1104-1105 INTERMEDIATE RUSSIAN.** 5 degree credits each semester, \$77.50 plus \$5 course fee. Total \$82.50 each semester.

Expansion of experience and understanding Russian; reading of contemporary texts. (Prereq 1103 for 1104; 1104 for 1105)

**Fall Sem 1104** Sec 1 W—6:20-9:05, FolH 205, Prokopov

**Spring Sem 1105** Sec 2 W—6:20-9:05, FolH 205, Prokopov

Symbols, abbreviations, off-campus class locations begin on page 401.



**Russ 5404 TOLSTOY.** 4 degree credits, \$68. (♦\$34)

Tolstoy's novels, stories and dramas. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 359]. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 **W**—6:20-8:50, FolH 207, Corten



**Russ 5407 PLAYS OF ANTON CHEKHOV IN TRANSLATION.** 4 degree credits, \$68. (♦\$34)

Analysis and discussion of Chekhov's prose works and his major plays using primarily an intrinsic approach. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 359]. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 **Th**—6:20-8:50, FolH 207, Polakiewicz

## social and behavioral sciences

(See General College)

### social work (SW)

*James Goodman, Director*

*Beulah Compton, Professor of Social Work*

*Richard G. Guilford, Professor of Social Work*

*Mayo K. Newhouse, Professor of Social Work*

*Annalee Stewart, Assistant Professor of Social Work*

*Michael Frumkin, Instructor in Social Work*

#### **A MAJOR IN SOCIAL WELFARE CAN BE COMPLETED IN THE EVENING.**

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

#### **B.A. Major Sequence**

Required Preparatory Courses

SW 1001

1 course each from 4 of the 5 following categories: (1) Soc 1001; (2) Psy 1001; (3) Anth 1002; (4) Econ 1001, 1014, 3001, 3002; (5) Pol 1001, 1027, 1031, 1041, 1051.

#### **Major Requirements**

SW 1001, 3004, 3005, 3101, 3984

32 cr from the following areas (specific courses listed at undergraduate adviser's office): 1 course in cross-cultural studies, 1 in organization theory; remaining cr from communication; urban and regional settings; social problems; human growth, development, and change; social history; law and social policy.

**You need not be a majoring in Social Work to register for these classes.**

#### **SW 1001 INTRODUCTION TO SOCIAL WELFARE AND COMMUNITY SERVICES.** 5 degree credits, \$77.50.

Fields of community-based social services, representative of societal responses to needs. Characteristics of such services reviewed historically, dynamically, and comparatively. (No prereq)

**Fall Qtr** Sec 1 **T**—6:20-8:50, ForH 60, Frumkin

Symbols, abbreviations, off-campus class locations begin on page 401.

**SW 3004 SOME CONCEPTS OF HUMAN DEVELOPMENT AND CHANGE.** 4 degree credits, \$5201. \$62.

Concepts of human development and change from various schools of thought; Erikson, Skinner, Maslow, and Jung. Relevance and implications for practice in the human services. (Prereq 1001)

Winter Qtr Sec 1 Th—6:20-8:50, ForH 70, Newhouse

**SW 3005 SOCIAL WORK PROCESSES: METHODS OF INTERVENTION.** 4 degree credits, \$5401. \$62.

The function of values and knowledge in social work practice; the meaning of giving and receiving help; the process in intervention; some social work principles. (Prereq 1001)

Spring Qtr Sec 1 Th—6:20-8:50, ForH 60, Stewart

**SW 3006 SOCIAL WORK PRACTICE: SELECTED SETTINGS.** 4 degree credits, \$62.

Social work practice theory in adaptations to specific target populations—children and youth, the emotionally ill, offenders, the aged, and the disabled. (Prereq 1001, 3004, 3005 or ‡)

Winter Qtr Sec 1 W—6:20-8:50, ForH 60

**SW 3101 SOCIAL WELFARE: A FRAMEWORK FOR ANALYSIS.** 4 degree credits, \$5101. \$62.

Historical development, legislative enactments, administrative policy, and program structure under which federal, state, and local governmental programs of income maintenance, medical care, and public housing operate. (Prereq jr or sr)

Winter Qtr Sec 1 T—6:20-8:50, ForH 150, Guilford

**★SW 3984 INTRODUCTION TO COMMUNITY DEVELOPMENT.** 4 degree credits, \$62.

Trends, pace, and dynamics that dominate urban communities; strategies used to achieve neighborhood goals; factors that control and influence change in planning; action on the community level. (Prereq 1001 or ‡. Limited to 75 students)

Spring Qtr Sec 1 W—6:20-8:50, ForH 155, Frumkin

**SW 3989 RESEARCH METHODS IN SOCIAL WORK.** 4 degree credits, \$62.

Introduction to the logic and methods of inquiry in human service fields and programs. (Prereq major in BS in Social Work track or ‡)

Spring Qtr Sec 1 T—6:20-8:50, ForH 447

**SW 5101 INTRODUCTION TO SOCIAL POLICY: SOCIAL WELFARE PERSPECTIVES.** 3 degree credits, \$3101. \$51.

Open to students who lack undergraduate social work education in the social welfare institutional structure. Basic concepts and perspectives necessary for understanding and analyzing social welfare programs. (Qualified students may register for graduate credit at the University of Minnesota. Prereq ‡ for undergrad)

Fall Qtr Sec 1 M—6:20-8:50, ForH 170, Guilford

**SW 5201 THEORIES OF HUMAN GROWTH AND CHANGE: IMPLICATIONS FOR SOCIAL WORK.** 3 degree credits, \$3004. \$51.

Open to students who lack undergraduate social work education in the social welfare institutional structure. Beginning synthesis of concepts of human growth and change. Review of various theories of human behavior and their implications for social work practice. A frame of reference within which the student may view the individual in his life's cycle will be developed. (Prereq ‡ for undergrad. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 T—6:20-8:50, ForH 70, Newhouse

**★SW 5401 INTERVENTIVE METHODS IN SOCIAL WORK PRACTICE.** 3 degree credits, \$3005. \$51.

Open to students who lack undergraduate social work education in the social welfare institutional structure. General concepts, functional concepts, strategies, and actions of social work practice. Introduction to the "problem-solving approach" as a framework for analyzing and dealing with situations of concern to social work. (Prereq # for undergrad. Limited to 35 students. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 Th—6:20-8:50, ForH 175, Compton

## **social work, continuing education in**

(see also Adult Psychiatry, page 375; Early Childhood Studies Certificates, page 378; and Foster Care Education Certificate, page 379; and Youth Studies, page 344)

*William Hoffman, Director of Continuing Education in Social Work and Professor of Social Work*

*Djuwe (Joe) Blom, Instructor and Doctoral Student, School of Social Work*

*Marge Carpenter, Director, Community Information and Referral Services, Community Health and Welfare Council of Hennepin County, Inc.*

*Will Dodge, Director of Administration, St. Paul Housing and Redevelopment Authority*

*Carol Ellison, Clinical Nursing Specialist, Crisis Intervention Center, Hennepin County Medical Center*

*Marvin Feit, Lecturer in Continuing Education in Social Work*

*Kathy Forrest, Director of Social Services, Unity Hospital*

*Donald Hadfield, Consultant in Human Relations, Minnesota Department of Education*

*Rosemary Hart, Teaching Associate in Speech and Communication*

*Michael Howe, Manager, Social Resource Center, Northern States Power*

*Ronald Kyllonen, Clinical Assistant Professor of Child Psychiatry*

*Lew Linde, Executive Officer, Juvenile Releases, Minnesota Department of Corrections*

*Richard Obershaw, Instructor, College of Health Sciences*

*Carole Olson, Family Life Educator, Family and Children's Service*

*Frank Quisenberry, Vice President, Educational Resources Health Central, Inc.*

*Willie Price, Lecturer in Continuing Education in Social Work*

*Robert Spano, Director, Social Services Department, University of Minnesota Hospitals, and Professor of Social Work*

*Shirley Zimmerman, Assistant Director and Instructor in Continuing Education in Social Work*

Courses offered through Continuing Education in Social Work do not duplicate any social work courses currently being taught in the School of Social Work. Rather, they are specialized and/or refresher courses designed to enhance professional competence in social work practice and related helping professions at all levels of practice (including post-MSW). Although courses (unless so designated) require no prerequisites and are not arranged sequentially, a student may package offerings which constitute a coherent program applicable to agency and/or individual needs, both short and long term (consultation is readily available through Departmental staff). All courses carry certificate credit as distinguished from degree credit and are recorded on a transcript available at the University's Admissions and Records Office. Certificate credits may be accepted as meeting degree requirements at the discretion of other colleges and universities.

Symbols, abbreviations, off-campus class locations begin on page 401.



Most courses, unless otherwise designated, require a B.A. degree with current employment in a social welfare agency. However, special consideration will be given to others with voluntary experience and/or those who wish to pursue an interest in this field. Such prospective students are encouraged to apply to the Director of Continuing Education in Social Work.

For a copy of the CESW brochure, listing possible changes and/or additions in the program, please write to: *Continuing Education in Social Work, 331 Nolte Center, University of Minnesota, Minneapolis 55455; or call (612) 373-5831.* For information regarding social work degree programs, write to the School of Social Work, 400 Ford Hall, University of Minnesota, Minneapolis, 55455; or call (612) 373-2632.

**SW 0204C ISSUES AND PERSPECTIVES IN AMERICAN SOCIAL WELFARE: AN OVERVIEW OF HOW POLICY SHAPES PRACTICE.** 3 certificate credits, \$46.50.

Critical issues underlying current debates on American social welfare will be examined. Competing philosophies and values guiding the historical development of American social welfare also will be examined within the context of social change, particularly in relation to current realities and trends. Illustrative examples will be drawn from fields such as income maintenance, family and child welfare, corrections, and mental health, explicating concepts relevant to each. This course is recommended for social service staff who have never had a course dealing with policy issues in American social welfare and/or who are interested in updating previously acquired information in this area and in further understanding how policy shapes practice. (Prereq B.A.)

Fall Qtr Sec 1 T—4-6:30, FolH 201, Zimmerman

**SW 0206C PSYCHOSOCIAL THEORIES OF PERSONALITY DEVELOPMENT.** 3 certificate credits, \$46.50.

Examine the psychological-social theories of personality development by Adler, Fromm, Horney and Sullivan within the framework of social ecology, integrating system and field theory perspectives. Group membership as a determinant of behavior will be explored in terms of its effects on the social processes of self actualization and motivation; the development of social work practice wisdom, effectiveness and change strategies will be stressed. (Prereq B.A.; for social workers and allied professionals.)

Fall Qtr Sec 1 T—7-9:30, FolH 102, Blom

**SW 0208C BASIC CONCEPTS OF SOCIAL WORK PRACTICE.** 3 certificate credits, \$46.50.

Deals with the following concepts basic to social work practice: acquisition of helping skills; models and methods of intervention; dynamics of the systems approach to helping; use of self vs. value constructs; dynamics of minority client population and the helping process. (No prereq)

Winter Qtr Sec 1 T—7-9:30, Armory 202, Price

**SW 0211C PLANNING, ORGANIZATION AND ADMINISTRATION OF SOCIAL SERVICES.** 3 certificate credits, \$46.50.

Designed to provide participants, especially persons with previous work experience in human services, with a practical approach to the planning, organization and administration of social services. The course will use the theory, research and experiences on formal organizations as the theoretical base. It will rely mostly on practical applications of the professional processes of planning, organization and administration to the actual experiences of the participants. (No prereq)

Spring Qtr Sec 1 T—7-9:30, FolH 201, Dodge

**SW 0213C HOW WORKERS AND CLIENTS CAN ASSESS THE HELPING PROCESS—TOGETHER.** 3 certificate credits, \$46.50.

A series of "unfinished" or "developing" topics in the general area of single worker—single client evaluation will be presented. Theory construction and model development as well as practice orientation, practice wisdom and research methodology that relate to "practice as research" will be discussed. Non-statistical course. (Prereq B.A. Open to everyone interested in evaluating their own practice)

Fall Qtr Sec 1 Th—4-6:30, FolH 201, Howe

Symbols, abbreviations, off-campus class locations begin on page 401.

**SW 0215C WORKING WITH THE AGED IN THE COMMUNITY.** 3 certificate credits, \$46.50.

An examination of the aging process and the attendant needs and problems of the older person(s). The focus of the course will be directed towards understanding and support of individuals who are able to remain relatively independent in their own homes, including public housing facilities. At least two of the sessions will be held in nursing homes and public housing projects. The course is recommended for paraprofessionals and beginners in the field. (No prereq)

**Spring Qtr** Sec 1 **M**—7-9:30, FolH 204, Hoffman

**SW 0217C DYNAMICS OF DEATH, DYING AND GRIEF COUNSELING.** 3 certificate credits, \$46.50.

**new**

Designed for those professionals (social workers, nurses, physicians, funeral directors, clergy) whose work brings them into close contact with death, dying and grief. The course will explore the student's sensitivity and self-awareness concerning these topics along with an investigation of how death, dying and grief are viewed in our society today. Particular attention will be paid to the dynamics of loss and the reactions of loss. Loss and grief therapy, children and death, the problems of dying, support groups for the bereaved, the funeral as therapy as well as other pertinent areas revolving around death will be discussed and studied. Counseling emphasis will be on grief and bereavement. (No prereq)

**Spring Qtr** Sec 1 **W**—6:30-9, FolH 107, Obershaw

**SW 0220C VOLUNTEERS I: THEIR TRAINING AND SUPERVISION.** 3 certificate credits, \$46.50.

For persons new to the experience of working with volunteers and responsible for the development and implementation of volunteer programs. Discussion will include the impact of societal trends on organizations and volunteer manpower utilization, volunteer recruitment, orientation and retention, supervision, and program design. Opportunities will be provided for individual assessment of organization structure and function, practicing basic volunteer and coordinator-director skills, and the development of on-going volunteer training programs. A prerequisite to 0221C. (No prereq)

**Fall Qtr** Sec 1 **M**—7-9:30, FolH 202, Hadfield

**SW 0221C VOLUNTEERS II: AN ADVANCED COURSE IN TRAINING AND SUPERVISION.** 3 certificate credits, \$46.50.

To promote the mastery of adult education theory and technical skill relevant to the role of a Manager of Volunteers; to encourage the application of adult education theory and methods to human service agencies and to specific volunteer and staff orientation sessions designed by class participation; to increase understanding of personal leadership styles in staff-volunteer-board relationships in agency; to prepare the program planning, designing and managing skills of participants. (Prereq 0220C or #)

**Winter Qtr** Sec 1 **M**—7-9:30, Armory 202, Hadfield

**SW 0510C APPROACHES TO COUNSELING THE ADOLESCENT.** 3 certificate credits, \$46.50.

To provide social workers and other professionals who work with adolescents and their families with an increased understanding of adolescence and approaches to counseling with this age group. The course will explore the dynamics and function of the adolescent, the adjustment and emotional problems that adolescence presents, and techniques of helping adolescents communicate, relate, gain self-understanding and modify adjustment patterns. How to deal with interactional problem patterns between adolescents and their peers and parents will also be discussed. (No prereq)

**Fall Qtr** Sec 1 **M**—7-9:30, Fairview Hospital, Lecture Hall  
(2312 S 6 St, Mpls), Kyllonen

(See also Youth Studies)

**SW 0511C ADVANCED COUNSELING SEMINAR: ADOLESCENT PSYCHOTHERAPY TECHNIQUES.** 3 certificate credits, \$46.50.

**new**

Course is open to experienced professionals who desire an investigation into counseling techniques and growth as a therapist. This will be a seminar and each participant should have an active case load for longitudinal study. (Prereq Master's level background of training or experience).

**Winter Qtr** Sec 1 **M**—7-9:30, BlegH 240, Kyllonen

**(course descriptions continue on page 321)**

# of special interest

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# REFLECT ON YOUR HERITAGE

Take a look at yourselves, Americans. Examine the complexities of your civilization: the promises, achievements, and uncertainties of your history. Take time to confront the conflicts that marked your past, and trouble you now. Look at the vitality of your politics, the diversity of your society, and the many expressions of your art and culture.

The following are among the many Extension classes that can help us take a look at ourselves as we near our third century:

American Studies 1101-1102-1103  
American Studies 1920/3920

American Studies 1920/3920

American Studies 1920/3920  
American Studies 1920/3920  
History 1310  
History 3802  
History 3804  
History 3841  
History 3861  
English 3455  
English 3451  
General College 1235  
Music 5711-5712  
Political Science 3306  
Political Science 5738

American Life  
1776: The Culture of the  
Revolutionary Era  
1876: Centennial America: Progress  
and Conflict  
1976: Bicentennial America: Reality  
and Promise  
Democracy's Nightmare: American  
Visions of Authoritarianism  
Images of the City  
Movies and the American Experience  
The Family in American History  
Colonial Period of American History  
Era of the American Revolution  
American Business History  
History of American Immigration  
American Short Story  
American Novel  
Law in Society  
American Popular Music  
The American Presidency  
Political Campaigns and Elections

(Some courses listed above may have prerequisite courses which must be satisfactorily completed before the next class may be taken. Check the course description in the course listings section of this Bulletin for details.)

# DELIGHTS FOR THE FILM FREAK



Have you ever wondered what's behind a film? You see the flickering pictures, hear the theme music, and read the credits; but what happens before that projected light hits the screen?

Several film courses are offered through Extension Classes which may answer these questions for you. Try Studio Arts 3701, for example, for a study of film as an art form, with production limited to descriptive and experimental work.

Or, if you're interested in a specific filmmaker, try Scandinavian Languages 5601 for a study of the films of Ingmar Bergman in the context of Scandinavian culture.

American Studies 1920/3920, MOVIES AND THE AMERICAN EXPERIENCE, provides a study of American film and its effects on American culture. Or, for a study of the impact of film on social issues, General College 3374 (FILM AND SOCIETY) typically covers such topics as urban living, minority stereotyping, ethical decisions and sexual mores.

GERMAN LITERATURE IN TRANSLATION AND THE FILM (German 3604) and LITERATURE AND FILM (Spanish 3615) offer studies in foreign literature in relation to the film medium. And LITERATURE: THEATRE – FILM AND DRAMA (General College 1374) studies stage plays and films, both as art forms and as media of communication. For further details see the alphabetical department listings in this Bulletin.

These credit courses are also available for no credit at half-price. Senior citizens may enroll at no charge.



**SPECIAL  
COURSES  
FOR  
SPECIAL  
PEOPLE**

Would your group like to study together in a University class?

Almost any existing Extension credit course may be scheduled off campus in a location convenient for you (in a business, school, church or other neighborhood meeting place).

Also, special noncredit classes can be developed upon request.

In either case, your group must be large enough to make the classes self supporting.

Interested? Telephone 373-5166 for information; or come to 202 Wesbrook Hall on the Minneapolis campus.

*(Information about the noncredit Continuing Education Unit is available in brochure form from the Department of Conferences, 131 Nolte Center, Minneapolis. Telephone 373-4894. The CEU, a nationally recognized unit of measurement awarded to participants in qualifying noncredit continuing education programs, becomes part of a permanent University record)*

# continuing education for Women



For people continuing their education after an interval away from school, and for part time students who find daytime classes convenient, **Continuing Education for Women** offers:

- University accredited courses for degree programs
- Workshops: study skills, speech
- Math Anxiety classes
- Short, noncredit courses in response to specific requests
- Over 100 courses each quarter
- Weekly or bi-weekly meetings, often 9:30 to noon
- Brown Bag classes during the noon hour
- Convenient locations

## 1976-77 INTERDISCIPLINARY SEMINARS

Students registered for any of the seminars listed below must complete the entire sequence to earn credit. (Seminars may also be audited.) Seminars are limited to 30 students; advance application and departmental approval are required. Registration is only through **Continuing Education for Women**. For complete information about these and all other courses, call 373-9743.

AmSt 5401-02-03 **Ideas in America**, 3 cr per qtr, Thursdays, Minneapolis Campus, Clarke A. Chambers.

Engl 5641-42-43 **Arts of Reading**, 3 cr per qtr, Tuesdays, MacPhail, Calvin Kendall.

FSoS 5240-40-40 **Art of Well Being**, 3 cr per qtr, Wednesdays, MacPhail, Richard Hey.

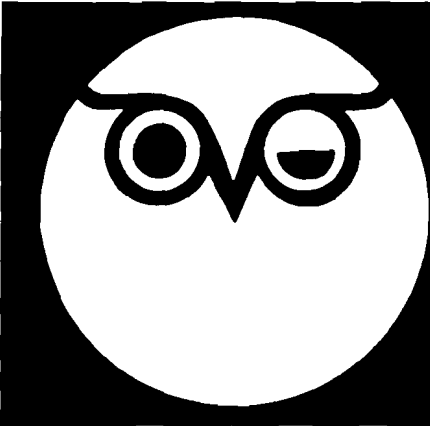
IoT Seminar on Science (*details incomplete*), Fridays, Minneapolis Campus,

Hum 5021-22-23 **New Worlds of Knowledge**, 3 cr per qtr, Wednesdays, MacPhail, J.D. Hurrell.

WoSt 5701-02-03 **Woman in America**, 3 cr per qtr, Tuesdays, MacPhail, Gayle Graham Yates.

### FOR INFORMATION:

Continuing Education for Women  
200 Wesbrook Hall  
University of Minnesota  
Minneapolis MN 55455  
373-9743



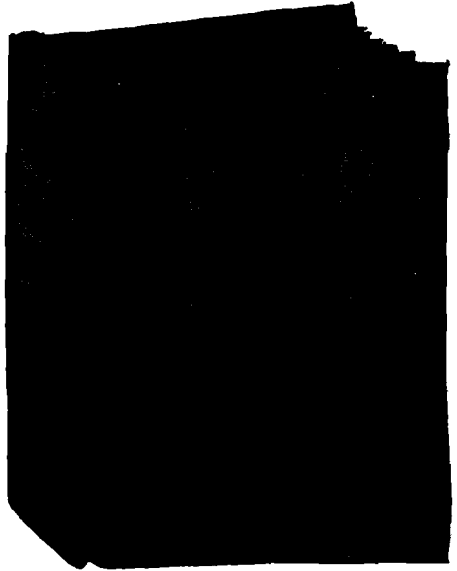
Extension Students have all this available  
to see where to read complete information about these  
opportunities, check the **Index** in the back of this **Bulletin**





# EXTENSION CLASSES

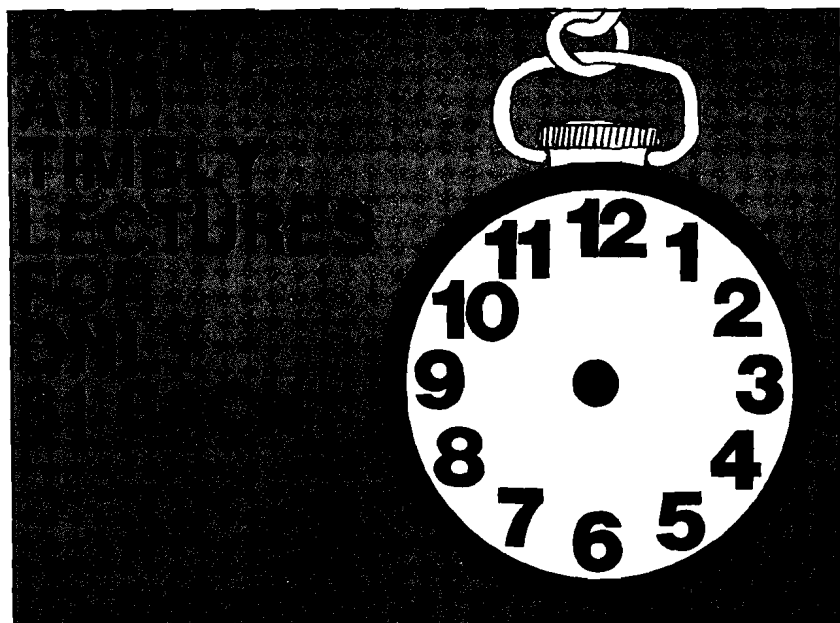




If you'd like to take classes simply for the joy of learning, without worrying about credit, why not try one of our non-credit classes? Discover the fun of learning without the pressures of grades, tests and transcripts. Try one of the **INFORMAL COURSES**; they're personal, flexible and non-competitive. Anyone may take them; there are no educational requirements. Learn about altered states of consciousness, Greek and Roman mythology, or Jewish mysticism. There are lots of Informal Courses available for your enjoyment and enrichment.

Informal Courses usually meet in the late afternoon or evening, one day a week for four to six weeks. They generally consist of small group discussion sections and, as the name implies, are informally run. The low cost of these courses makes them affordable to anyone who wishes to learn just for the fun of it.

In addition to the courses listed above, Informal Courses offer workshops in non-fiction writing, instruction in Minnesota history, and discussion on the American work ethic, wild animals in the north woods, astronomy and taxes. For a complete list of Informal Courses, see page 196.



How do I choose a counseling or therapy group?  
Why can't an astronomer rely on his own eyes?  
Should doctors always tell the truth?

Last year, hundreds of people tried to answer these questions in University Sampler Lectures. Samplers are self-contained lectures which faculty present as part of their regular evening classes.

Sample one lecture or several — about 15 lectures are offered each quarter. Choose topics you're interested in, or come to learn something new. You need no preparation or prior knowledge to attend.

Registration must be made in advance: admission to each lecture is only \$1, and persons 62 and older may register free.

For a Sampler brochure, and to register for lectures, call 373-3039, or write to:

University Sampler  
202 Wesbrook Hall  
University of Minnesota  
Minneapolis MN 55455

**HALF-PRICE  
TUITION ! ....**



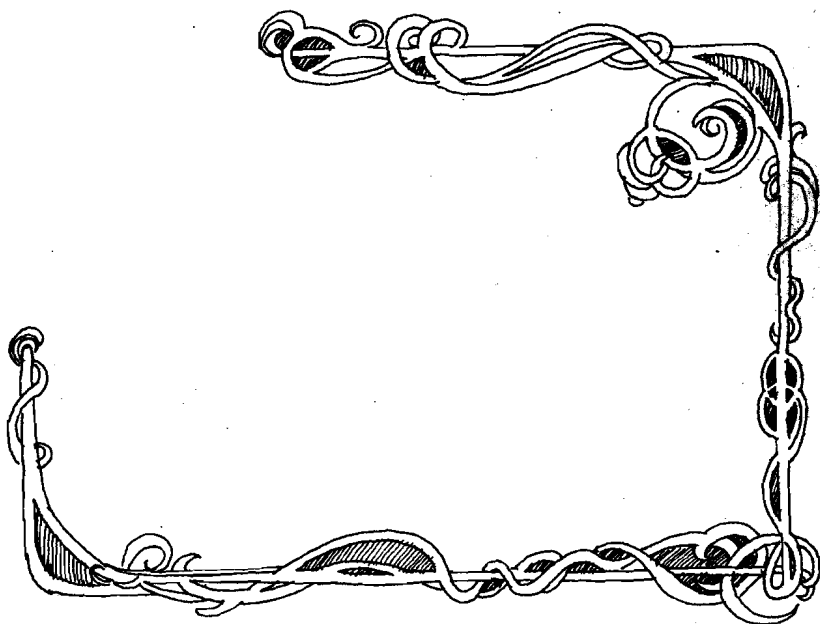
## **JUST LOOK FOR THE DIAMONDS**

Have you ever wanted to learn about advertising psychology, juvenile delinquency, the physics of photography, or the occult just for the benefit of learning something new, without having to take examinations or submitting work? Now you can by registering for no credit in a regular credit Extension class.

Regular credit classes with no limitations on enrollment are open on a reduced-tuition basis for no credit and are indicated by a ♦ symbol in the margin in the class offerings section of this Bulletin. No-credit participants keep up with readings and participate in class discussions, but do not submit work for evaluation or take examinations (no transcript or registration record is maintained).

A course with a diamond indicates the following:

- ♦ Adults can take these classes for one-half the credit tuition.
- ♦ Young adults, age 12 to 16, pay only \$3 when accompanied by an adult registered for the same course.



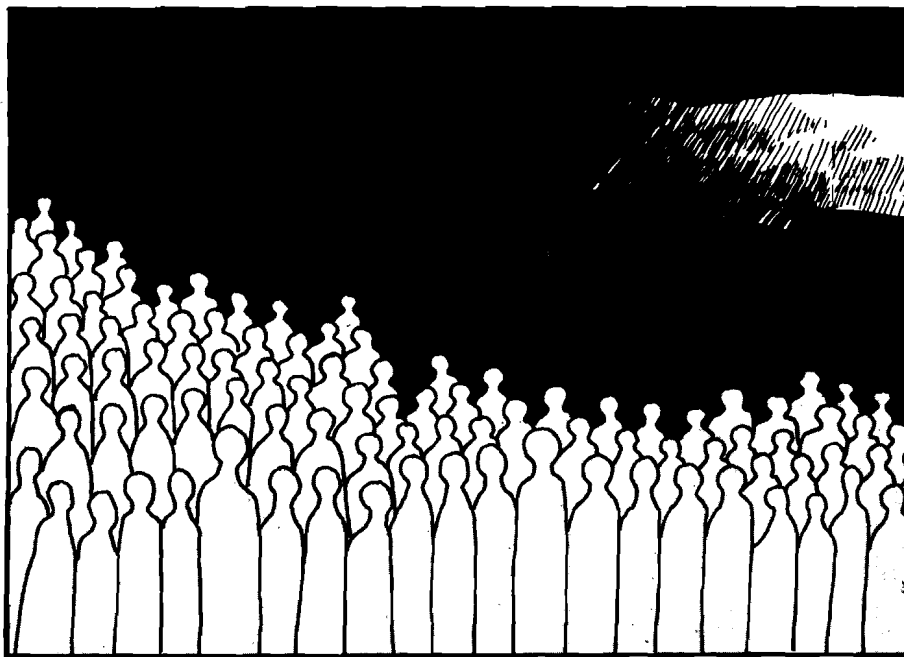
If you're 62 or older, it's easier than ever for you to take advantage of Extension's many courses and programs. Take the time to learn about new subjects you've never had the time to study before, or to consider current issues in the news.

Now, you can take almost any course *free*. Here are some important facts for you to know:

- Persons 62 and older can register *free* in any nonlimited-enrollment class for no credit. You can also register free for no credit in a limited-enrollment class on a space-available basis, but you must wait until after the first week of mail registration. Call 376-1371 during specified dates for information on the availability of space in limited-enrollment courses; then register in person or by mail.

- You can take a course for University credit for only \$2 a degree, certificate, or entrance credit hour.

- For nonlimited-enrollment courses, register by mail or in person. See the list of registration locations, registration dates and procedures in the *When and How To Register* section of this Bulletin, for both limited- and nonlimited-enrollment classes.



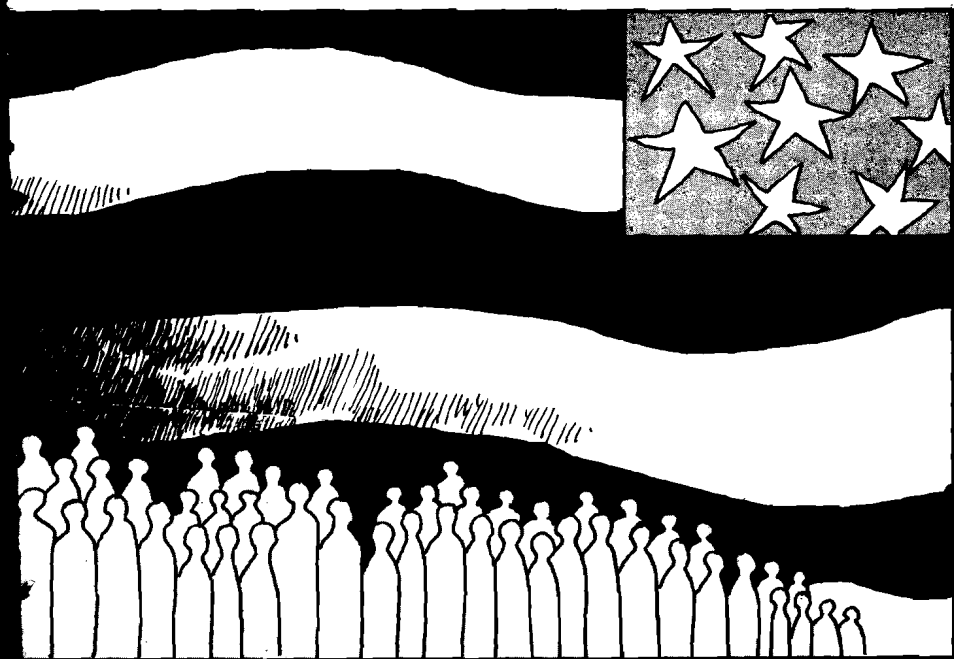
## IDENTITIES WITHIN

If we are to realize that we are all "passengers on Spaceship Earth," we must recognize the uniqueness of each race and nationality, and appreciate the world's ethnic diversity. What has formed the heritage of the Slavic peoples? What is reflected in the literary achievements of the Africans? How have Latin American societies changed in modern times? And what is at the root of conflicts and problems that have accompanied diversity: the enmity between such groups as the Arabs and the Israelis, or between minority and "majority" groups in our own land? To begin to learn the stories of other peoples and groups is not merely to satisfy a curiosity, but to initiate communication toward true understanding.

Some Extension classes on various groups are:

Afro-American Studies 3061-3062  
Afro-American Studies 5301  
American Indian Studies 3036  
American Indian Studies 5211  
Chicano Studies 1107  
East Asian Languages 1001  
German 3610

The Black Family  
African Literature  
Dakota History and Culture  
Arts of the American Indian  
Introduction to Chicano Studies  
East Asian Heritage  
Modern German Authors in  
Translation



## THE MELTING POT

Modern Greek 1101-1102-1103  
History 3861  
Informal Courses 0017  
History 5432-5433  
Social Work 0524C  
Near and Middle Eastern Studies  
3525

Jewish Studies 3126  
Persian 1101-1102  
Slavic 1501  
Scandinavian 1504

Spanish 1503

Urban Studies 3500

Beginning Modern Greek  
History of American Immigration  
Ethnic Experience in America  
Problems in Contemporary Africa  
Minority-Majority Relations

Modern Arab World: 1915 to  
present

Themes in Modern Jewish Thought

Beginning Persian

The Slavic Heritage

Scandinavian Immigrant Culture and  
its Background

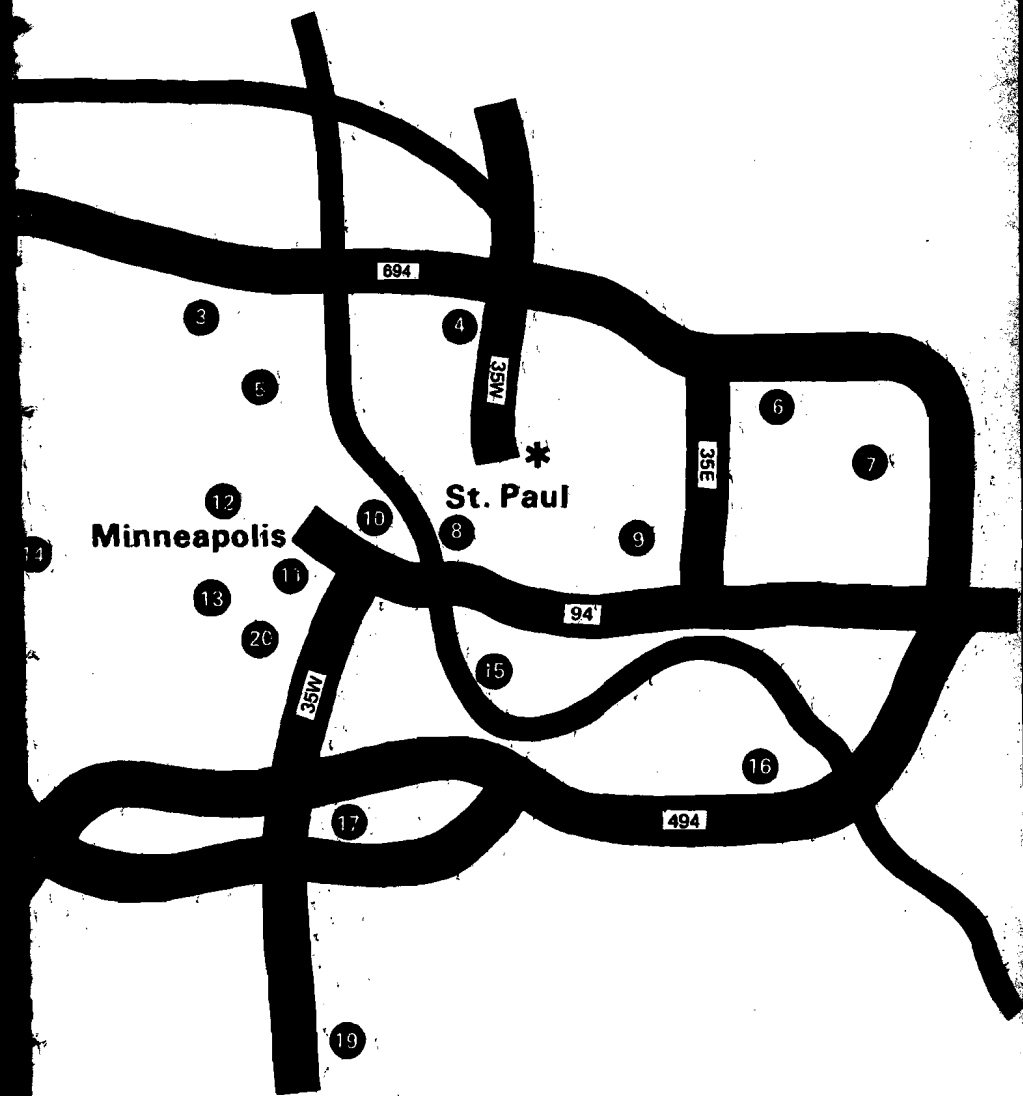
Culture, Civilization of Modern Latin  
America: Societies in Change

Urban Ethnicity

(For other courses of interest in ethnic studies, see the departments listed above. Also check "Languages and Studies" in the index. Departments are arranged alphabetically in the course listing section of this Bulletin. Some classes listed above may have prerequisite courses which must be satisfactorily completed before the class may be taken. Check course descriptions for details.)

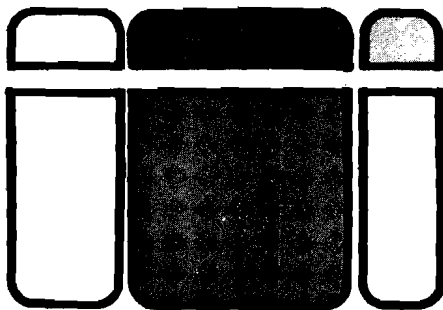
- 1 Cambridge High School/Cambridge
  - 2 Buffalo Junior High School/Buffalo
  - 3 Brooklyn Center High School/6500 Humboldt N.
  - 4 Irondale High School/2425 Long Lake Rd/New Brighton
  - 5 Elim Church/40th and W. Broadway/Robbinsdale
  - 6 Kellogg High School/15 E. County Rd B2/Little Canada
  - 7 Hillside Junior High School/2051 E. Larpenteur/Maplewood
  - 8 St. Paul Campus
  - 9 St. Paul Capitol Complex
  - 10 Minneapolis Campus
  - 11 WCCO Radio Building/Downtown Minneapolis
  - 12 Sandburg Junior High School/2400 Sandburg Lane/Golden Valley
  - 13 Jewish Community Center/4330 S. Cedar Lake Rd/St. Louis Park
  - 14 Minnetonka Senior High School/18301 Highway 7/Minnetonka
  - 15 The Talmud Torah of St. Paul/636 S. Mississippi River Blvd/St. Paul
  - 16 St. Stephens Church/1575 Charlton/West St. Paul
  - 17 Richfield High School/7001 Harriet Ave. S./Richfield
  - 18 Minnesota Landscape Arboretum/Chaska
  - 19 Nicollet Junior High School/400 E. 134th St./Burnsville
  - 20 Southwest High School/3414 W. 47th St./Minneapolis
- 
- \* B. Dalton Bookseller/Eden Prairie Center
  - \* B. Dalton Bookseller/Rosedale





**For complete details, see page 421!**

# HELP YOURSELF!



Continuing Education and Extension's professional staff of counselors and program advisers is ready to help you identify your interests, and to help you formulate your educational and/or 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?*

. . . then stop by 314 Nolte Center or call 373-3905

Advisers and counselors are available without appointment during registration hours and during the regular daytime hours. Monday through Thursday evenings counselors are available (by appointment only) from 5 until 8 p.m. Because of crowded parking facilities, students who have appointments with counselors should allow an extra half hour to find a parking space.

*Also ask about:*

Individual appointments with advisers from the General College, Colleges of Education and Business Administration, and the Institute of Technology.

*Veterans' counselor available in Nolte:*

Vocational and personal counseling, program advising and testing are among the services available to veterans at 319 Nolte Center. The office also helps put veterans in touch with other assistance centers. The Veterans Affairs Counselor for Extension Classes can be reached at 373-3905 or 373-3973 during office hours, 9 a.m. — 12 noon, and 1 — 4 p.m., Monday through Friday.

A battery of tests is available by appointment to help you learn more about your abilities and interests. There is a \$25 charge for students, and \$50 for nonstudents.

Information about Continuing Education and Extension is available on tape by telephone through the Digital Information Access Line (DIAL). Call 373-1234 for a brochure.

# FREE STUDY SKILLS HELP

# FREE

The Extension Classes Reading and Writing Skills Center provides the help you need in note taking, outlining, theme writing, research writing, reading, grammar, footnoting, bibliographies, vocabulary, spelling, and book review. There's no phone, so just walk into 109 Nicholson Hall any weekday except Friday between 9 a.m. and 3 p.m., or 5 and 8 p.m. Friday's hours are 9 a.m. to 3 p.m.

Special basic or beginning level instruction in reading is provided by the Reading and Study Skills Center in 104 Eddy Hall. The Center is open between 8 a.m. and 4 p.m. daily. Phone 373-4193 for an appointment. (Appointments may be scheduled in the evening.)

Credit courses are also offered in communication skills. See, for example, FUNDAMENTALS OF USAGE AND STYLE (*General College 1405*) and COMMUNICATION SKILLS: INDIVIDUAL STUDY (*General College 1409*). For other credit courses see the Communication Skills section of *General College* in the alphabetical course listings section of this Bulletin.

# FOR GLOBETROTTERS AND STUDENTS OF THE WORLD



**UNIVERSITY IN LONDON** During spring quarter 1977 (March 28-June 11) travel to England and study the life and culture of the British while earning University credit. Courses taught by British and University of Minnesota faculty have in the past included art history, theater, and English literature. The program includes visits to London theaters, Stratford-on-Avon, and many other landmarks of the London area.

Approximate cost for the term is \$750, which includes 12 credits of tuition and lodging (including full English breakfast). Students must arrange their own transportation. Fall Quarter 1977 in London is also tentatively planned. For more details call or write Extension Classes, 170 Wesbrook Hall, University of Minnesota; or call Gail Fraser at 373-3926, Minneapolis campus.

**DIRECTED STUDY ABROAD** The student of architecture who would like to include travel and the observation of the world's great and influential architecture in his studies will be interested in this program offered through the School of Architecture. Register for Architecture 5970 through Extension Classes and combine architectural research with local or foreign travel. The specific course content and number of credits will be arranged in consultation with the School of Architecture. For further information, telephone 373-2198.

**SUMMER ARTS ON LONG ISLAND** Courses in painting, drawing, and art history will be offered in conjunction with the 1977 summer program at Southampton College at Long Island University in New York (Approximate dates July 7 to August 3). For more information on the four-week course call Gail Fraser at 373-3926.

**INTERNATIONAL STUDY AND TRAVEL CENTER** For information on special reduced airline fares, and other overseas study programs, call the Study and Travel Center in Coffman Union 373-0180.

**SUMMER ARTS STUDY CENTER** is a series of one- and two-week courses of study and creativity at Quadna Mountain Lodge, Hill City, Minnesota, from June through August, 1977. This "arts community" of faculty and students will share ideas and discussions on such subjects as studio arts, crafts, music, theater, writing, and literature. For more information write or call the Summer Arts Study Center, University of Minnesota, 1128 LaSalle Avenue, Minneapolis, Minn.; 373-1925 or 373-4947.

## ACTIVITIES FOR MEN AND WOMEN



Enjoy sports activities of all kinds to help you keep in shape and to unwind from work or studies.

By paying an athletic services fee of \$4.76 a quarter or \$7.06 a semester — the same as day school students pay (*fee subject to change without notice*), you may participate in organized sports and use athletic facilities.



The individual, dual, and team sports include badminton, basketball, bowling, fencing, handball, swimming and touch football. Extramural competition involves intramural champions as well as individual players and teams representing various athletic clubs.



**For women**, clubs are organized for aquatics, badminton, dance, field hockey, golf, horsemanship, judo, team sports, and tennis. **For men**, club activities are in archery, bowling, cricket, fencing, gymnastics, judo, karate, rowing, rugby, scuba, soccer, weight lifting, whitewater canoe, and yoga.



For further information about these programs and activities, telephone 373-4200.



**Note:** Intercollegiate athletic tickets are available to students and their spouses at discount rates. Telephone 373-3181 for information.

**HAVE  
A  
BUSY  
WEEK?**



**TRY A  
WEEKEND  
COURSE**

If you find it difficult or inconvenient to attend classes during the week, you may want to take advantage of Saturday class offerings. A number of University departments are offering Saturday courses both for certificate and degree credit, and for personal enrichment.

For a detailed description of the degree and certificate programs, consult the *Degrees and Certificates* section of this Bulletin. Check the Index in the back of this Bulletin for page number.

**Departments offering courses on Saturday include:**

Accounting	History
Anthropology	Humanities
Art Education	Industrial Relations
Arts, Studio	Marketing
Business Law	Mathematics
Civil and Mineral Engineering	Physical Education
Economics	Political Science
English	Psychology
Foreign Study	Quantitative Analysis
General College	Sociology
Greek	Theatre Arts

**Women's Studies**

# GET INVOLVED IN STUDENT GOVERNMENT

HELP SOLVE UNIVERSITY PROBLEMS



Solving bookstore problems. Gaining legislative support for Extension programs. Improving campus parking. Seeking more graduate-level Extension classes. Finding financial aid.

These are the kinds of concerns and problems the Extension Classes Student Board tackles every year as a vital force in the University community.

To accomplish its work, the Board voices its concerns in open discussions and rewarding encounters with the University president, the vice president for student affairs, administrative officials, and Regents. You can join the Board any time during the year when you're registered for classes.

Extension students can also be elected to the University Senate, the primary academic governing body of the University. Students on the Senate also serve on the Student Board.

Want to be part of these groups? For more information telephone 376-7500.



# **FALL 1976 OPEN HOUSE**

**THURSDAY  
SEPTEMBER 9**

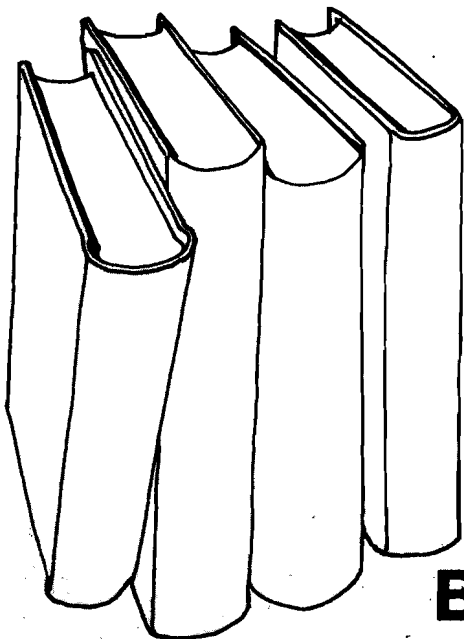
Where to go for help, whom to ask for what, how to decide what to do and when — these are some questions you might be faced with if you're a new student and unfamiliar with the campus, or if you are thinking of taking an Extension class.

If you think you might have one of these (or any other) questions, or if you simply wish to get to know Extension, plan to attend our coffee and talk informal open house. It will be held from 5 to 8 p.m. Thursday, September 9, in the Nolte Center lounge on the Minneapolis campus.

Counselors and program advisors will be on hand to answer questions about almost anything you wish to know. Even if you have no specific problems or questions, drop by for a cup of coffee or cider and let us get to know you.

A free baby-sitting service will be offered if you need it. And you can park free in University lot #35, 17th Ave. S.E., at Fourth St. S.E. For a free campus map and a parking map of the University, telephone 376-7500.





## ... JUST GO TO THE RIGHT BOOKSTORE

After registering for classes, purchase your books as early as possible to be assured of getting the material you need. Each bookstore posts lists of required textbooks for each Extension course. (Check the **Index** in the back of this **Bulletin** for the page number where you may read more about bookstores and their hours.)

**B. Dalton Bookseller at Rosedale and Southdale:** books for classes scheduled at many neighborhood centers. Books for these classes are also available at campus bookstores.

**Nicholson Bookstore:** courses in the College of Liberal Arts (*except for those CLA departments listed below at the Smith bookstore*), General College, and College of Education.

**Harold D. Smith on the West Bank:** College of Business Administration and College of Liberal Arts (*history, political science, geography, sociology, criminal justice studies, American Indian studies, theatre arts, studio arts, economics, and family social science*).

**Main Engineering:** Institute of Technology.

**Coffey Hall:** books for courses taught on the St. Paul campus.

**Health Sciences:** College of Medicine, College of Dentistry, College of Pharmacy, School of Nursing, and School of Public Health.



# TELEVISION INDEPENDENT STUDY

## ON MONDAY NIGHTS WATCH TELEVISION AND LEARN

Television Independent Study brings the University to your home through

- television presentations on KTCA, Channel 2
- audio cassettes (in some courses)
- written material and graphics
- instructor feedback.

All reading materials are available by mail, and assignments can be completed without coming to campus. Viewers not wishing to register for credit may purchase a study guide from Extension Independent Study.

Call 376-4925 for more information and a registration form. Or write to Extension Independent Study, 27T Westbrook Hall, University of Minnesota, Minneapolis, MN 55455.



### FALL 1976

#### HEREDITY AND HUMAN SOCIETY

Biology 1101, 4 credits — David Fan, Associate Professor  
September 27 — December 6, 1976, 9-9:30 p.m.

#### FROM ENLIGHTENMENT TO REVOLUTION: OUR 18TH CENTURY HERITAGE

Humanities 1001, 5 credits — Mark Lowry, Assistant Professor  
September 27 — November 29, 1976, 9:30-10 p.m.



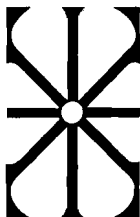
### WINTER 1977

#### THE CONSTITUTION: WHAT IT IS TODAY

Political Science 5503, 4 credits — Harold Chase, Professor  
January 3 — March 7, 1977, 9-9:30 p.m.

#### CLASSICAL MYTHOLOGY: MYTHS AND THE MODERN WORLD

Classics 5145, 4 credits — Jackson Hershbell, Associate Professor  
January 3 — March 7, 1977, 9:30-10 p.m.



### SPRING 1977

#### GEOGRAPHY OF THE TWIN CITIES

Geography 1973, 4 credits — Fred Lukermann, Professor  
March 28 — May 30, 1977, 9-9:30 p.m.

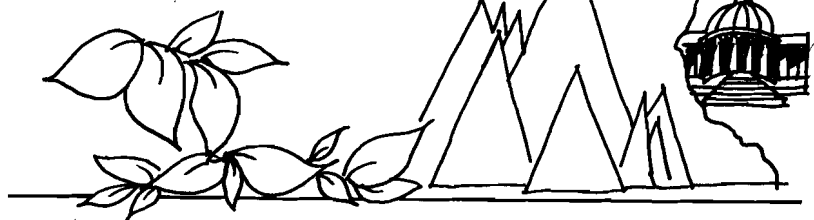
#### PRINCIPLES OF ADVERTISING

Journalism 1201, 4 credits — Willard Thompson, Professor  
March 28 — May 30, 1977, 9:30-10 p.m.

Television Independent Study is a joint effort of Extension Independent Study and University Media Resources

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## THAN LAKES AND SNOW?



The only things 'outsiders' seem to know about our state are the winter temperatures (from the weather reports), and the number of lakes (from our license plates). Look what they don't know:

**WILD ANIMALS OF THE NORTH WOODS (IC 0010)** presents a natural history of the area and the animals that live there.

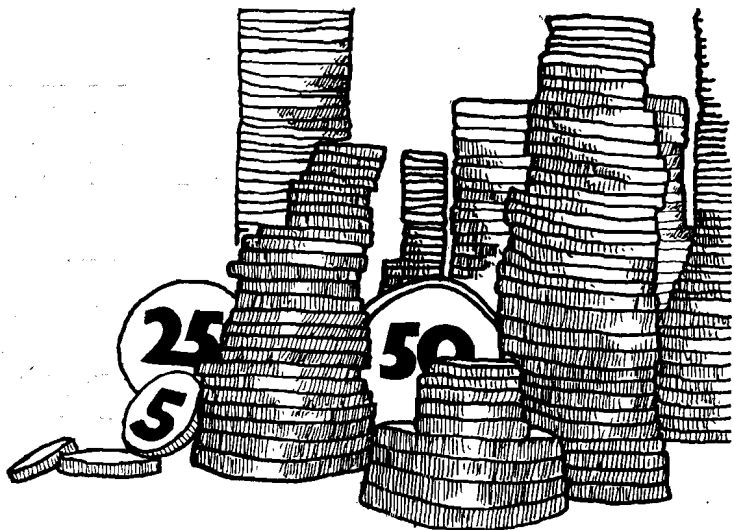
**MINNESOTA PLANT LIFE (Botany 1009)** surveys plants native to the state and includes some Saturday field trips.

**MINNESOTA CORRECTIONS: PENAL ALTERNATIVES (General College 3236)** deals with correctional institutions in the state and innovations in prison reform and prison alternatives.

**MINNESOTA RESOURCES (General College 3841)** discusses such topics as energy sources, conservation, and urban development, and **WORKSHOP IN AMERICAN URBAN ETHNICITY (Urban Studies 3500)** will focus largely on the Twin Cities area.

Or you might be interested in taking courses like **ARCHITECTURE IN MINNESOTA (Art History 3576)**, **GEOLOGY IN MINNESOTA'S STATE PARKS (General College 1178)**, **MINNESOTA HISTORY: POLITICS AND PERSONALITIES FROM THE DEPRESSION TO THE TROUBLED SIXTIES (Informal Courses 1130)**, **MINNESOTA BIOGRAPHY (General College 3845)**, or one of a large selection of classes offered through several University departments.

For a complete listing by department, see the alphabetical course listings in this Bulletin. You'll probably find that there is more to Minnesota than just lakes and snow.



If you're interested in making a large investment, build your confidence with **INTRODUCTION TO INVESTMENTS** (*Finance, Business 0001C*). And for a detailed study of federal, state, and local income tax laws, **LEGAL STUDIES: INCOME TAXATION** (*General College 3585*) includes instruction in the preparation of income tax returns and related materials.

**INDIVIDUAL AND FAMILY BUDGET PLANNING** (*Informal Courses 0001*) offers instruction in specific skills and abilities needed to use credit wisely, discriminate between your wants and needs in spending, set financial goals and develop contingency savings funds. Or, for a more detailed study of family financial management, try **PROBLEMS IN FAMILY FINANCIAL MANAGEMENT** (*Family Social Science 5219*).

(See the alphabetically arranged course listing section of this Bulletin for related courses in the departments of *Accounting, Business Administration, Business Law, Economics, Finance, General College, Industrial Relations, Insurance, Management, Management Information Systems, Marketing, Operations Analysis and Management, Quantitative Analysis, Real Estate, Salesmanship, and Transportation*). Some courses may have prerequisite courses which must be satisfactorily completed before another course may be taken. Check course descriptions in the course listing section of this Bulletin.



# SUMMER '77 WORK OR PLAY BY DAY.

Summer is a pleasant time on campus: quiet and casual. Enroll for a 5- or 10-week summer evening Extension class. Courses are scheduled in over 50 departments. A descriptive bulletin will be available during March.

Call 376-3000 for your copy during March, 1977.

## Terms

First 5-week term:  
Second 5-week term:  
Ten-week term:

June 13 to July 15  
July 18 to August 19  
June 13 to August 19

## Registration Dates

In-person:  
By Mail:  
By Telephone:

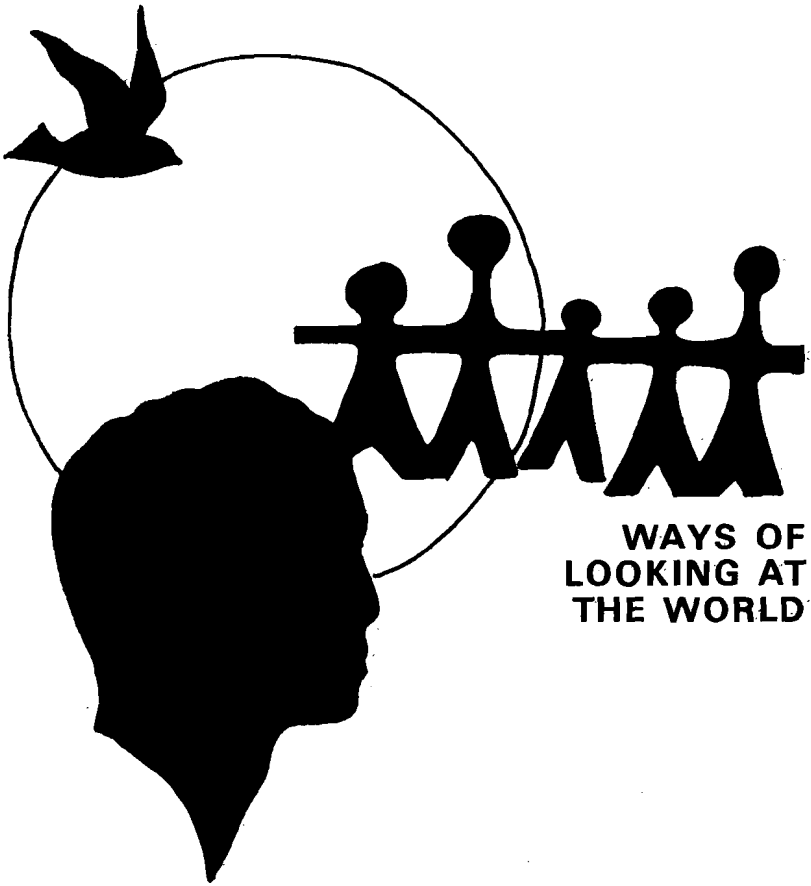
May 30 to July 14  
Beginning May 16  
May 23 to July 14  
(Limited-enrollment class  
cards will not be mailed  
out after July 8)



When was the last time you sat down at the piano, thought about the musical instrument you used to play, or opened up your sketch pad? Now is the time to do it again! In addition to art, music and theatre classes in this Bulletin, there are these alternatives waiting for you:

- **Activities at MacPhail Center** (*1128 LaSalle Ave., in downtown Minneapolis*). MacPhail is home to nearly 100 teachers of music, dance, theatre and art on all levels of instruction.
- **Summer Arts Study Center** — in Minnesota's north woods, artists, theatre people, musicians, poets and teachers attend one- and two-week workshops in all areas of the arts (*from June through August*). 39 different workshops, credit and noncredit. Plan a workshop at Quadna Mountain in the summer of 1977. Brochure available in March.
- **Circulating exhibitions** — your community can sponsor one of the University of Minnesota's circulating art exhibitions. Call for information.
- **Tour of "Ouroboros"** — there is a new twist to Architecture these days. Glass walls, sealed windows, and year-round air conditioning are out, and ecology consciousness is in. Call for a tour of the University's experimental laboratory houses.
- **Loan Play Library** — School, community, and professional theatres in Minnesota number 1000! Many select their plays by examining copies on file at the Loan Play Library of 15,000 plays located in 305 Westbrook Hall (the only cost is postage).
- **Consultation in the Arts** — We have staff members trained in art, music and theatre ready to help you find the actor, director, conductor, or technical information you need. If we can't help, we will find the expert you need, or even set up a workshop or training session for your group.

Our telephone number is 373-4947. Or, write Continuing Education in the Arts, 320 Westbrook Hall, University of Minnesota, Minneapolis 55455.



## WAYS OF LOOKING AT THE WORLD

The Old Testament and literary tradition as seen through historical narratives will be discussed as part of **THE KING JAMES BIBLE AS LITERATURE** (*English 3251*).

Can you be objective about religious beliefs? Can it be proved that "God is Love"? These and other topics are considered in **PHILOSOPHY OF RELIGION** (*Philosophy 3521, 5521*).

Other courses of related interest are **THE BACKGROUND OF THE BIBLE** (*Near and Middle Eastern Studies 1501, 3501*), **RELIGION AS A SOCIAL INSTITUTION** (*Sociology 5151*), and **ANTHROPOLOGY OF RELIGION AND FOLKLORE** (*Anthropology 5131*).

(Also see the alphabetical course listings section in this **Bulletin** for related courses in the departments above and in the departments of *American Studies, History, Psychology, Religious Studies, Jewish Studies, Arabic and Hebrew*.)

# OUR ENVIRONMENT IS EVERYONE'S BUSINESS



We're all concerned about the environment, so you might be interested in taking one of these diverse courses which deal with our natural resources. *(Some may have prerequisite courses which must be satisfactorily completed before the listed course may be taken. Check the Course Offerings section of this Bulletin for details!)*

**INTRODUCTION TO ENVIRONMENTAL TECHNOLOGY** (*Natural Science 3101*) examines pollution problems in air, noise, water, and solid waste.

**ENERGY AND ENERGY POLICY** (*Public Affairs 5151*) deals with environmental, social, and economic implications of alternative energy policies.

**BUSINESS AND THE NATURAL ENVIRONMENT** (*Business, Government and Society 3003*) explores environmental deterioration caused by business to air, land and water.

**BIOLOGY AND THE FUTURE OF MAN** (*Biology 3051*) is a non-technical discussion of biological factors affecting the state of the environment and the quality of life.

Other related courses: **INTRODUCTION TO ENVIRONMENTAL ENGINEERING** (*Civil Engineering 3500*), **COMMUNITY NUTRITION** (*Food Science & Nutrition 3642*), **ENERGY POWER, AND SOCIETY** (*Natural Science 3301*), **INTRODUCTION TO ENERGY POLICY** (*Public Affairs 3151*), **INTRODUCTION TO AIR POLLUTION PROBLEMS** (*Public Health 5181*), **WEATHER AND CLIMATE** (*General College 1111*), **MAN AND HIS ENVIRONMENT** (*General College 1112*), **CONSERVATION AND UTILIZATION OF NATURAL RESOURCES** (*General College 1113*), **INTRODUCTION TO ECOLOGY** (*Ecology and Behavioral Biology 3001*), and **ENVIRONMENTAL HEALTH ASPECTS OF WATER SUPPLY** (*Public Health 5241*).



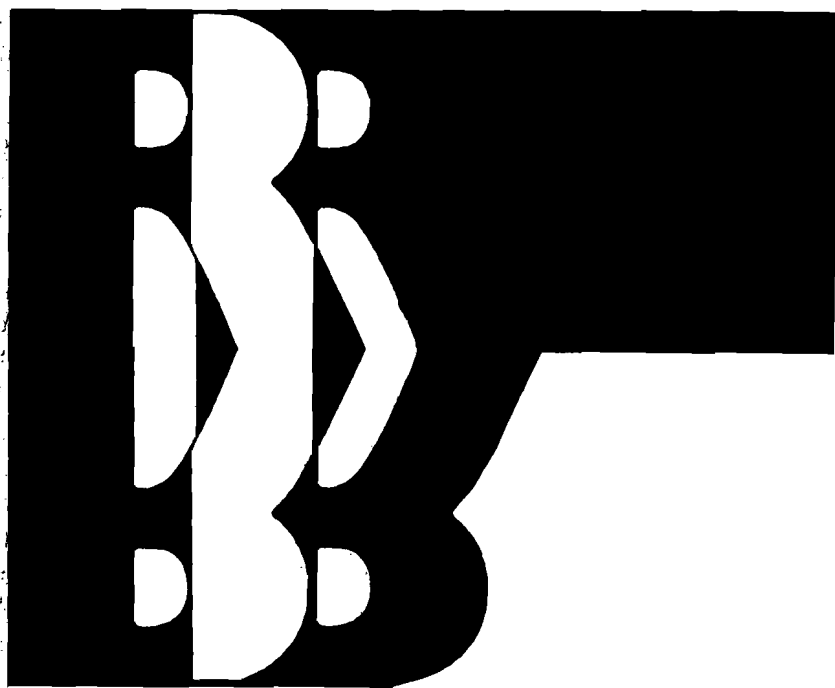
# NEED INFORMATION ABOUT THE UNIVERSITY?



Just use your phone. Try the University Digital Information Access Line (*DIAL*) from your home phone or a campus phone. Obtain your information in two short easy steps:

- 1) DIAL 373-1857 between 8 a.m. and 8 p.m. Monday through Friday; or between noon and 5 p.m. Saturday and Sunday.
- 2) Request by number the tape you wish to hear. The list below is only a partial list, but you may pick up a brochure listing all the available tapes at 107 Temporary North of Mines on the Minneapolis campus; or simply call 373-1234 and request that you be sent a brochure.

- |   |  |
|---|--|
| 1113 Getting Extension grades on your day school transcript | 2109 Earning credit without attending classes      |
| 1400 Locations and hours of University bookstores           | 2110 Continuing Education for Women                |
| 1401 Book refunds, resale, and other bookstore policies     | 2111 Independent study courses for women           |
| 1801 University Child Care Center                           | 2113 Extension classes in neighborhood centers     |
| 1802 Child care facilities near the campus                  | 2114 Financial aid for Extension students          |
| 2100 Extension registration information                     | 2206 Campus Assistance Center                      |
| 2101 Program advising                                       | 2903 On-campus evening study spaces                |
| 2102 Counseling   | 3101 University health service                     |
| 2103 Independent study                                      | 3901 Inter-campus bus schedule                     |
| 2104 Extension evening classes                              | 5100 What's Happening: A calendar of social events |
| 2105 Transfers to Extension; admission to degree programs   | 5103 Athletic ticket information                   |
| 2106 Noncredit reduced tuition and \$1 Sample Lectures      | 5801 Veteran's assistance and outreach             |
| 2107 Certificate programs                                   |  |



This year Extension Classes has a new service to help make your registration a little easier. Now you can telephone 376-1371 during specified dates to find out if space is available in limited-enrollment classes. If space is available, it will be reserved for you, and you will be sent registration materials. See calendar for specific dates.

Each course description in this **Bulletin** provides the information necessary to complete a registration form. Obtain official forms by calling 373-3195, or stop in at 101 Wesbrook Hall on the Minneapolis campus or at the MacPhail Center, 1128 LaSalle Avenue in downtown Minneapolis.

Special dates for registering for limited- and nonlimited-enrollment classes are listed in the *When and How to Register* section of this **Bulletin**.

For classes taught in certain neighborhood centers you can also register at the center for courses taught there. See the *Office Hours* section for details.

(Course descriptions continued from page 288)

**SW 0512C CORRECTIONS: AN OVERVIEW OF LAWS, CONCEPTS AND TREATMENT PROGRAMS.** 3 certificate credits, \$46.50.

Basic principles of corrections' relationship to the other criminal justice components, non-criminal approach to victimless crime, the four discretionary points of the criminal justice system, recent due process requirements of parole and institutional disciplinary hearings and current correctional legislation. Special emphasis will be placed upon community corrections programs such as youth service bureaus, diversion projects, restitution centers, half-way houses and chemical dependency treatment programs. (No prereq)

**Fall Qtr** Sec 1 **W**—6-8:30, Jones 1, Linde

**SW 0515C INTERVIEWING: INDIVIDUAL AND FAMILY.** 3 certificate credits, \$46.50.

For all persons employed in the helping professions whose assignment includes interviewing and counseling. Attention will be given to the purpose of the interview and to the utilization of interviewing principles as well as roles and functions of social workers and other related disciplines in counseling individuals and families. This is prerequisite to 0518C. (No prereq)

**Fall Qtr** Sec 1 **Th**—7-9:30, FolH 102, Olson

**SW 0516C SOCIAL WORK PRACTICE IN HEALTH CARE.** 3 certificate credits, \$46.50.

Examination of the role of the social work clinician in a variety of health settings: general hospital, crisis service, rehabilitation, psychiatry and long-term care. Basic principles of medical-social diagnosis, collaboration, discharge planning, community linkage systems. Emphasis will be placed on social work assertiveness as a skill. (No prereq)

**Winter Qtr** Sec 1 **Th**—7-9:30, FolH 105, Forrest

**SW 0517C SOCIAL WORK IN THE HEALTH SETTING.** 3 certificate credits, \$46.50.

Review social service planning and delivery in a health setting, and assess the impact of legislation on the delivery of social services from an administrative point of view. This course is open to anyone interested in examining services to consumers of health care. Those responsible for program planning, coordination and evaluation of social work will study an operational model, the elements of which include: The psycho-social-environmental problems appropriate for social work intervention; the strategies (functions, services, activities) designed to address these problems; a time-oriented information and reporting system designed to monitor these problems and strategies; and finally a goal-oriented evaluation system. These elements have been integrated in a management by objectives style being tested to integrate practice with legislation related to public accountability, quality assurance for social work in health care settings. (No prereq)

**Spring Qtr** Sec 1 **Th**—4-6:30, FolH 209, Spano

**SW 0518C INTERVIEWING II.** 3 certificate credits, \$46.50.

For those interested in learning more about interviewing theory and techniques. Through the use of films, tapes, lectures, and participation in interviews, it will be possible to examine the interview process in various settings. There will also be focus on group interviewing. (Prereq 0515C or equiv or 2)

**Winter Qtr** Sec 1 **Th**—7-9:30, FolH 209, Olson

**SW 0519C BEHAVIORAL SOCIAL WORK: A PROCEDURAL APPROACH TO PRACTICE.** 3 certificate credits, \$46.50.

Exploration of behavior analysis and behavior modification. Emphasis on self-control procedures in the development of behavioral social work practice. Basic introduction to the field, concepts and procedures. Focus on "constructional" framework for problem solving and individual change. (Prereq B.A. Open to anyone interested in issues of behavior modification in social work)

**Spring Qtr** Sec 1 **Th**—5:30-8, FolH 102, Howe

Symbols, abbreviations, off-campus class locations begin on page 401.

**SW 0520C COMMUNICATION SKILLS AS APPLIED TO SOCIAL WORK PRACTICE.** 3 certificate credits, \$46.50.

Development of skills for clear, responsive communication as it relates to social work practice. Emphasis will be on: verbal and nonverbal dimensions of communication; constructive feedback; effective listening; and conflict resolution. Practice in using the skills will focus on relationships between co-workers, between co-worker and client, and between co-worker and supervisors. The course format will integrate discussion and lecture, with *primary* attention to giving members actual practice in using specific skills in job-related situations. (No prereq)

**Spring Qtr** Sec 1 **M**—4-6:30, FolH 102, Hart

**SW 0521C METHODS IN GROUP WORK.** 3 certificate credits, \$46.50.

To assist workers with their development toward working with people in groups. From a systems and problem-solving approach, workers will explore the utilization of identified skills in practice. Focus is on the practical application of the worker's own approach to the group situation, using a variety of learning techniques. (No prereq)

**Spring Qtr** Sec 1 **T**—4-6:30, FolH 105, Feit

**SW 0522C MANAGEMENT AND ADMINISTRATION OF DRUG AND ALCOHOL PROGRAMS.** 3 certificate credits, \$46.50.

**new** Course focus is on how one manages a chemical dependency program. Concentration will be on the legal, policy, financial management, income generation, planning, research and evaluation aspects of management. These aspects will be reviewed and discussed from a "systems" perspective, with particular emphasis on examining administrative/managerial functions. This course is interdisciplinary. (No prereq, recommended for administrators and mid-level managers (or people about to move into these positions), in the health and chemical dependency fields, who have or are developing chemical dependency programs.)

**Winter Qtr** Sec 1 **T**—7-9:30, Jones 10, Feit

**SW 0524C MINORITY-MAJORITY RELATIONS.** 3 certificate credits, \$46.50.

**new** Deals with the following concepts basic to understanding the human culture in American society: Slavery, an answer to the Black cry; human rights vs. civil rights; plight of minority groups in American society; institution vs. individual racism; affirmative action—policy vs. practice; income, education, sex and race indicators of racism in American society. The course is for any person(s) interested in gaining a deeper sensitivity to the problems faced by minority persons who are in need of services, such as volunteers, lay persons, agency personnel, both professional and para-professional, who are involved in service delivery. (No prereq)

**Fall Qtr** Sec 1 **M**—6-8:30, Jones 4, Price

**SW 0530C SKILLS FOR THE EFFECTIVE PROVISION OF INFORMATION AND REFERRAL SERVICES.** 6 certificate credits, \$93.

**new** Designed for paid information and referral staff. It will cover basic elements in the provision of information and referral services, such as interviewing, resources, information-giving and referral, follow-up, advocacy, outreach, the use and training of volunteers, work management and in-service training. *This is a 6-credit course offered within one quarter for 6 hours one day a week for 9 weeks and was designed to meet the particular scheduling problems of small out-state information and referral services.* (No prereq)

**Spec Term** Sec 1 **F**—9 a.m.-3 (Sept. 24-Nov. 19) Carpenter, Ellison

(See fall registration dates, page 13. No late fee through Sept. 20)

**Three sequential Youth Studies (YoSt) 5000-level Special Term courses (Work with Youth—Individual/Family/Groups) are being held throughout the year in cooperation with the Center for Youth Development and Research. Registration forms are available only through the Department of Continuing Education in Social Work. To obtain a copy of the special brochure, listing course descriptions, dates and registration procedures, call (612) 373-5831 or write to Continuing Education in Social Work, 331 Nolte Center, University of Minnesota, Minneapolis 55455.**

Symbols, abbreviations, off-campus class locations begin on page 401.

## management in human service agencies program

Continuing Education in Social Work is offering a three-course sequence, currently in its fourth year, designed to provide supervisory and management personnel working in human service agencies with a background in modern management concepts and practices. The sequence is especially intended for the manager or supervisor who has not had the benefit of formal management training and for staff who may be moving into such positions in the near future. The courses are also designed to introduce students to relevant theory and practice in the administration and management of agencies and to broaden their understanding of day-to-day agency life. These courses may be taken singly or as a total 9-credit program, as outlined.

### **SW 0310C INTRODUCTION TO MANAGEMENT.** 3 certificate credits, \$46.50.

To give the supervisor and the administrator of the human service agency an introduction to the management of human and material resources necessary to accomplish agency objectives. Topics will include: definition of management, planning, organizing, leadership, decision making, management philosophy, communication, and the role of the manager as a change agent. The emphasis will be on practical application. (No prereq)

**Fall Qtr** Sec 1 **W**—6:30-9, FolH 108, Quisenberry

### **SW 0311C MANAGEMENT TECHNIQUES APPLIED TO HUMAN SERVICE AGENCIES.** 3 certificate credits, \$46.50.

To acquaint the administrator and supervisor of human service agencies with some of the tools and techniques available to better enable them to accomplish agency objectives. Topics will include: industrial engineering techniques, planning techniques, financial management, the computer, and other management tools. The emphasis will be on practical application. (No prereq)

**Winter Qtr** Sec 1 **W**—6:30-9, FolH 103, Quisenberry

### **SW 0312C PERSONNEL MANAGEMENT IN HUMAN SERVICE AGENCIES.** 3 certificate credits, \$46.50.

To focus on the management of human resources in human service agencies. Topics will include: methods of employee selection, employee evaluation, work group behavior, employee development, theories of employee motivation, legal environment of supervision, industrial relations, and methods of supervision. The emphasis will be on practical application. (No prereq)

**Spring Qtr** Sec 1 **W**—6:30-9, FolH 102, Quisenberry

## sociology (Soc)

(See also General College courses in social and behavioral sciences; and ethnic studies courses, page 300)

*Robert Alexander, Instructor in Sociology*  
*Jan Benson, Instructor in Sociology*  
*Leslie Brown, Instructor in Sociology*  
*Michael Carter, Instructor in Sociology*  
*Tom Chapel, Instructor in Sociology*  
*Philip J. Cunnien, Instructor in Sociology*  
*Rhoda Estep, Instructor in Sociology*  
*Harold Grasmick, Assistant Professor of Sociology*  
*Carla Howery, Instructor in Sociology*  
*Gary Jurek, Instructor in Sociology*  
*David McKee, Instructor in Sociology*

Symbols, abbreviations, off-campus class locations begin on page 401.

Ed Mack, Instructor in Sociology  
 Allan Malkis, Instructor in Sociology  
 Paul Mattessich, Instructor in Sociology  
 Peter Parilla, Instructor in Sociology  
 Richard E. Sykes, Assistant Professor of Sociology  
 Mohammad Tavakoli-Yazdi, Instructor in Sociology

**A MAJOR IN SOCIOLOGY CAN BE COMPLETED IN THE EVENING.**

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

**B.A. Major Sequence**

Major Requirements

3505, 3506

3801, 3802, 3803 (should be taken soph yr)

A theory course from 5305, 5701, 5705, 5711

16 additional 3xxx- or 5xxx-level sociology cr

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

**Soc 1001 INTRODUCTION TO SOCIOLOGY.** 4 degree credits, \$62. (♦\$31) (IS)

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)

- |                   |         |  |
|-------------------|---------|--|
| <b>Fall Qtr</b>   | Sec 1   | <b>M</b> —6-8:30, AndH 210, Mattessich   |
|                   | ★Sec 2  | <b>W</b> —7-9:30, SiP Capitol Complex, Capitol Square A; Estep (Limit 50 students) |
|                   | ★Sec 3  | <b>W</b> —7-9:30, Minnetonka HS 119, Chapel (Limit 40 students)                    |
|                   | Sec 4   | <b>Th</b> —6:20-8:50, AndH 270, Mack   |
|                   | Sec 5   | <b>Sa</b> —9 a.m.-11:30, BlegH 155, Malkis   |
| <b>Fall Sem</b>   | Sec 6   | <b>T</b> —6-7:40, BlegH 125, Grasmick  |
| <b>Winter Qtr</b> | Sec 7   | <b>M</b> —6:20-8:50, BlegH 245, Estep  |
|                   | Sec 8   | <b>T</b> —6:20-8:50, RarigC 616, Chapel  |
|                   | Sec 9   | <b>W</b> —6:20-8:50, BlegH 404, Mattessich   |
|                   | ★Sec 10 | <b>W</b> —6:30-9, Richfield HS 251-252, Brown (Limit 60 students)                  |
| <b>Spring Sem</b> | Sec 11  | <b>Th</b> —3-9:40, AndH 230, Grasmick  |
| <b>Spring Qtr</b> | ★Sec 12 | <b>M</b> —7-9:30, Hillside JHS, Maplewood, Jurek (Limit 60 students)               |
|                   | ★Sec 13 | <b>T</b> —6:30-9, Sandburg JHS 212, Golden Valley, Benson (Limit 35 students)      |
|                   | Sec 14  | <b>W</b> —6:20-8:50, BlegH 155, Mack   |
|                   | Sec 15  | <b>Sa</b> —9 a.m.-11:30, BlegH 155, Brown  |

**Soc 1002 AMERICAN COMMUNITY.** 4 degree credits, \$62. (♦\$31) (IS)

Sociological analysis of modern American society. Topics include distribution of population, urban-rural differences, social factors in business systems, occupational groups, determination of social status, and minority group adjustment. (No prereq)

- |                   |        |   |
|-------------------|--------|---|
| <b>Fall Qtr</b>   | ★Sec 1 | <b>W</b> —7-9:30, Southwest HS 9, Mpls; McKee (Limit 60 students) |
| <b>Fall Sem</b>   | Sec 2  | <b>T</b> —8-9:40, BlegH 230, Cunnien                              |
| <b>Winter Qtr</b> | Sec 3  | <b>Sa</b> —9 a.m.-11:30, BlegH 250, McKee                         |
| <b>Spring Sem</b> | Sec 4  | <b>Th</b> —6-7:40, BlegH 235, Cunnien                             |
| <b>Spring Qtr</b> | Sec 5  | <b>M</b> —7-9:30, Cambridge HS; Chapel                            |

Symbols, abbreviations, off-campus class locations begin on page 401.

**Soc 3103 ELEMENTS OF CRIMINOLOGY.** 4 degree credits, \$3101. \$62. (◆\$31)

General survey of field of criminology. (Prereq 1001 or equiv; 3102 rec)

**new****Fall Sem** Sec 1 T—6:20-8:00, BlegH 10, Parilla**Spring Sem** Sec 2 T—6:20-8:00, BlegH 10, Alexander

(See also Criminal Justice Studies)

**Soc 3405 INEQUALITY: INTRODUCTION TO STRATIFICATION.** 4 degree credits, \$62. (◆\$31)

Inequality—causes and consequences. Inequality in American society. Related concepts of class, class cultures, status, aggregates; the social forms of inequality, their consequences for life changes and life styles. (Prereq 1001)

**Fall Qtr** Sec 1 Sa—9 am.-11:30, BlegH 135, Carter**Soc 3501 THE FAMILY SYSTEM.** 4 degree credits, \$62. (◆\$31) (IS)

Evolution of family, development of unity or disunity, roles of the several members of the family, methods of investigation of family. (Prereq 3505, or 3506)

**new****Spring Qtr** Sec 1 T—6:20-8:50, BlegH 155, Mattesich**Soc 3503 SEX, ROMANCE AND RELATIONSHIPS.** 4 degree credits, \$62. (◆\$31)

Sociological perspectives on sexual socialization; ideas of masculinity and femininity; history and functions of love and romance; characteristics of romantic relationships, intimacy, emotionality, sexuality, exclusivity; investigation of sexual deviance for light it sheds on sexual norms. (Prereq 1001)

**new****Winter Qtr** Sec 1 T—6:20-8:50, AndH 270, Howery**Soc 3505 PRINCIPLES OF SOCIAL ORGANIZATIONS.** (replaces 1505) 5 degree credits, \$5401. \$77.50.

Develop understanding of basic concepts, substantive materials, and general issues in the area of social organization. (Prereq 1001 and 3801 or equivalent)

**Spring Qtr** Sec 1 T—6:20-8:50, BlegH 220, Mack**Soc 3506 PRINCIPLES OF SOCIAL PSYCHOLOGY.** (replaces 1506) 5 degree credits, \$5201. \$77.50.

Knowledge of the ideas and findings related to social psychology and experience with the activities involved in developing empirically based knowledge in social science. (Prereq 1001 and 3801 or equivalent)

**Winter Qtr** Sec 1 W—6:20-8:50, SocSci 860, Cunnien**\*Soc 3601 URBAN COMMUNITY.** 4 degree credits, \$62. (◆\$31)

Urban community patterns. Comparison of social interaction in neighborhood, city and metropolis—across societies. Review of community studies. Urban power structures. Analysis of settlement patterns, organization of social life and urban problems. (Prereq 1001 or 1002. Limited to 50 students)

**new****Winter Qtr** Sec 1 M—7-9:30, WCCO Radio Bldg 512, Mpls**Soc 3801 SOCIOLOGICAL METHODS I: DESCRIPTIVE STATISTICS.** 5 degree credits, \$77.50 plus \$4 course fee. Total \$81.50.

Descriptive statistics as utilized in analysis of sociological data, measures of central tendency, deviation, correlation and regression graphs, simple treatment of three and four variables, probability. (No prereq. Some beginning algebra recommended)

**Fall Qtr** Sec 1 TTh—6-8:00, BlegH 230, Howery**Soc 3802 SOCIOLOGICAL METHODS II: STATISTICAL INFERENCE.** 5 degree credits, \$77.50 plus \$4 course fee. Total \$81.50

Statistical inferences, probability, hypothesis tests, use of statistical reasoning in analysis of sociological data. (Prereq 3801 or \*)

**Winter Qtr** Sec 1 TTh—6-8:00, BlegH 155, Benson

Symbols, abbreviations, off-campus class locations begin on page 401.

**Soc 3803 SOCIOLOGICAL METHODS III: RESEARCH METHODS.** 5 degree credits, \$77.50 plus \$4 course fee. Total \$81.50



Survey of data collection methods, including advantages of major methods and limitations when applied to specific types of problems. (Prereq 3802 or §)

**Spring Qtr** Sec 1 **TTh**—6-8:00, AndH 310, 370

**Soc 5125 POLICE PROBLEMS AND PRACTICES IN THE UNITED STATES.** 4 degree credits, \$68. (◆\$34)



Personnel, organization, and public relations of police forces; techniques of integrating police work with other community agencies. (Prereq 3102, 3103 or §; CJS 5101, 5102 rec. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 **M**—6-8:30, AndH 370, Sykes

**Soc 5135 WHITE-COLLAR CRIME.** 4 degree credits, \$68. (◆\$34)

Analysis of various types of white-collar crime, broadly construed; roots in American society; responses by theoreticians, amateur and professional politicians. (Prereq 3102, 3103 or §; CJS 5101, 5102 rec. Qualified students may register for graduate credit at the University of Minnesota.)

**Winter Qtr** Sec 1 **Th**—6:20-8:50, BlegH 425, Parilla

**Soc 5141 JUVENILE DELINQUENCY.** 4 degree credits, \$68. (◆\$34)

Advanced study of the definition and origins of juvenile delinquency and societal response to it through regulatory agencies; particularly the special characteristics of juvenile justice institutions. (Prereq 3102, 3103 or §; CJS 5101, 5102 rec. Qualified students may register for graduate credit at the University of Minnesota.)

**Spring Qtr** Sec 1 **W**—6-8:30, BlegH 235

**Soc 5151 RELIGION AS A SOCIAL INSTITUTION.** 4 degree credits, \$68. (◆\$34)

Structure and function of religious organizations in various types of societies, nature of religious leadership, type of religious participations and relationship of religion to other social institutions. (Prereq 3505 or 5401 or equiv or §. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 **M**—7-9:30, StP Talmud Torah

**Soc 5201 INTRODUCTION TO SOCIAL PSYCHOLOGY.** 4 degree credits, \$3506. \$68. (◆\$34) (IS)

Research and theory regarding relation of individual to social groups. Emphasis on socialization processes; effects of social interaction and isolation; individual behavior under conditions of social organization and disorganization; cultural influence and its limits. Not for Soc majors. (Prereq 8 cr in sociology, anthropology, economics, political science, psychology. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 **M**—5:30-8:00, BlegH 360, McKee

**Soc 5401 SOCIAL ORGANIZATION.** 4 degree credits, \$3505. \$68. (◆\$34)

Organization and structure of social groups; basic culture patterns of economic, political, and social institutions. Integration and disintegration of social groups and institutions. Essentials of social dynamics. Not for soc majors (Prereq 8 cr in soc, anth, psy, pol, or econ. Qualified students may register for graduate credit at the University of Minnesota.)

**Spring Qtr** Sec 1 **Th**—6-8:30, BlegH 350, Howery

**Soc 5551 WORLD POPULATION PROBLEMS.** 4 degree credits, \$68. (◆\$34)

Population policy, both historical and present day, in Europe, Asia and other selected areas but with special emphasis on the U.S. Some discussion given to the field of population and power politics. (Prereq 3505, 5401 or equiv or §. Qualified students may register for graduate credit at the University of Minnesota.)

**Winter Qtr** Sec 1 **M**—6-8:30, BlegH 360, Tavakoli-Yazdi

(See also Family Planning Administration)

Symbols, abbreviations, off-campus class locations begin on page 401.



**Soc 5601 URBAN SOCIOLOGY.** 4 degree credits, \$68. (◆\$34)

Cities, urban ecology; urban institutions and urban way of life. (Prereq 3405 or 3505 or 5401 or equiv or †. Qualified students may register for graduate credit at the University of Minnesota.)

**Fall Qtr** Sec 1 **T**—6:20-8:50, BlegH 350, Alexander

(See related courses in Political Science; Public Affairs; Urban Studies; History; and General College)

**Soc 5705 BACKGROUNDS OF MODERN SOCIAL THOUGHT.** 4 degree credits, \$68. (◆\$34)

Major trends of social thought from Renaissance to 19th century; factors contributing to origin of sociology. (Prereq 3505, 3506 or 5201, 5401 or equiv or †. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 **T**—6-8:30, BlegH 430, Brown

**Soc 5951 MINORITY GROUP RELATIONS.** 4 degree credits, \$68. (◆\$34) (IS)

Systems of ethnic stratification; race relations in American society. (Prereq 3505, 5201 or 5401 or equiv or †. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 **W**—6-8:30, AndH 270

(See other ethnic studies courses, page 300)

**★Soc 5957. SOCIOLOGY OF AGING.** 4 degree credits, \$68. (◆\$34)

Survey of situations and problems facing aging people in modern societies and of the devices these societies have developed or might develop to change situations and solve problems. (Prereq 3505, 5201, 5401 or equiv or †. Qualified students may register for graduate credit at the University of Minnesota.)

**Fall Qtr** Sec 1 **Th**—7-9:30, Irondale HS 105, New Brighton; Jurek  
(Limit 40 students)

**Winter Qtr** Sec 2 **W**—7-9:30, StP Capitol Complex, Civil Service Center  
(Limit 50 students)

## soil science (Soil)

(See also Agriculture)

*Russell S. Adams Jr., Professor of Soil Science*

*Harold F. Arneman, Professor of Soil Science*

*Lowell Hanson, Professor of Soil Science and Extension Specialist*

**Soil 0100C GARDEN SOIL MANAGEMENT.** 3 certificate credits, \$46.50. (◆\$23.25)

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

**★Soil 3122 INTRODUCTORY SOIL SCIENCE.** 4 degree credits, \$5022, \$62.

Basic physical, chemical and microbiological properties of soils. Soil genesis, classification, and principles of soil fertility. (Prereq Chem 1001 or 1004 or equiv. Meets concurrently with 5022. Limited to 14 students combined)

**Fall Qtr** Sec 1 **Lect TTh**—6:20-7, So 115, StP Campus, Arneman  
**Lab T**—7:05-10, So 130

Sec 2 **Lect TTh**—6:20-7, So 115, StP Campus, Arneman  
**Lab Th**—7:05-10, So 130

**new**

Symbols, abbreviations, off-campus class locations begin on page 401.



*Russell Hamilton, Professor of Portuguese*  
*Ruth E. Jones, Associate Professor of Spanish*  
*Lawrence Mantini, Associate Professor of Spanish*  
*Ricardo Narváez, Professor of Spanish*  
*Antonio Ramos, Associate Professor of Spanish*  
*Ileana Rodriguez, Assistant Professor of Spanish*  
*Ronald Sousa, Associate Professor of Spanish and Portuguese*  
*Nicholas Spadaccini, Associate Professor of Spanish*  
*Constance Sullivan, Associate Professor of Spanish*  
*Hernán Vidal, Associate Professor of Spanish*

## spanish (Span)

There are two sequences of courses in beginning Spanish from which the prospective student may select the one best suited to his needs. Within the 1101-1103 sequence, one group of courses meets for two hours twice a week, and the other is an intensive session which meets for four hours once a week. Students may select the appropriate section depending on their weekly schedule.

**Span 1101-1102-1103 BEGINNING SPOKEN SPANISH: ORAL APPROACH**, carrying 5 degree credits per unit, comprises the standard course in first-year Spanish. The principal aim of the course is to teach the student to understand and speak Standard Spanish so that he can communicate in Spain, Spanish America and among U.S. Spanish-speaking minority groups. As the student progresses through the 1101-1103 sequence more emphasis will be placed each quarter on reading and writing, in that order. This sequence is recommended for those planning to travel in Spanish-speaking nations, to continue the study of Spanish or to satisfy college language requirements.

**BEGINNING SPANISH: MODIFIED ORAL APPROACH, Span 1201-1202-1203-1204-1205**, carrying 3 degree credits per unit. This sequence is recommended for those who desire a general introduction to the language, but who wish to proceed at a slower pace than required for the standard 5-credit units. Students wishing further Spanish after completing 1205, register for 1104.

Language laboratory fees are charged for courses in which use of the lab is required or recommended. Cassette tapes are available to Extension Classes students on a take-home basis. Students can pick up tapes at the Learning Resources Center on the second floor of Walter Library or the second floor of Temporary South of Coffey on the St. Paul Campus. Students must present a fee statement when checking out tapes. Rental costs are covered by the special fees paid with tuition.

Learning Resource Center hours are: 8 a.m.-10 p.m., Monday-Thursday; 8 a.m.-6 p.m., Friday; 9 a.m.-6 p.m.; Saturday; Sunday hours being planned.

The following non-language courses may be applied toward the CLA foreign language requirement, Route II for Spanish (see page 359); Geog 5132, Mus 5704, 5705, Span 1501, 1502, 3602, 3605, 3614, 3615.

**Span 1101-1102-1103 BEGINNING SPOKEN SPANISH: ORAL APPROACH**. 5 degree credits each quarter. \$77.50 plus \$5 course fee each quarter. Total \$82.50. (IS)

Intensive work in understanding and speaking Spanish. See note above. (No prereq for 1101; 1101 or § for 1102; 1102 or § for 1103)

<b>Fall Qtr</b>	<b>1101</b>	Sec 1	<b>TTh</b> —6-8:05, FoIH 204
		Sec 2	<b>W</b> —6-10:05, FoIH 208
<b>Winter Qtr</b>	<b>1102</b>	Sec 3	<b>TTh</b> —6-8:05, FoIH 207
		Sec 4	<b>W</b> —6-10:05, FoIH 208
<b>Spring Qtr</b>	<b>1103</b>	Sec 5	<b>TTh</b> —6-8:05, FoIH 204
		Sec 6	<b>W</b> —6-10:05, FoIH 204

Symbols, abbreviations, off-campus class locations begin on page 401.

**Span 1104 INTERMEDIATE SPANISH, ORAL APPROACH: INTERPRETATION OF MODERN PROBLEMS.** 4 degree credits, \$62. (IS)

Intensive review of the spoken language, coupled with continued development of reading, comprehension and writing skills, with an emphasis on active use of readings dealing with modern social and cultural problems in Spain and Spanish America to build vocabulary and to model compositions. (Prereq 1103 or 1205 or #)

Fall Qtr Sec 1 T—6-9:20, FoH 209

**Span 1105 INTERMEDIATE SPANISH, ORAL APPROACH: DISCUSSIONS OF MODERN LITERATURE AND THE PRESS.** 4 degree credits, \$62. (IS)

Intensive advanced review of the spoken language, coupled with continued development of reading, comprehension and writing skills, with an emphasis on active use of readings from modern Spanish and Spanish-American literature and the press. (Prereq 1104 or #)

Winter Qtr Sec 1 T—6-9:20, FoH 203

**Span 1201-1202-1203-1204-1205 BEGINNING SPANISH: MODIFIED ORAL APPROACH.** 3 degree credits each quarter, \$46.50 plus \$5 course fee. Total \$51.50 each quarter.

Comprehension, speaking, reading and practice in pronunciation. See note above for details of this modified course. (No prereq for 1201; 1201 or # for 1202; 1202 or # for 1203; 1203 or # for 1204; 1204 or # for 1205)

Fall Qtr 1201 Sec 1 T—6-8:30, FoH 103

1204 Sec 2 T—6-8:30, FoH 107

Winter Qtr 1202 Sec 3 T—6-8:30, FoH 108

1205 Sec 4 T—6-8:30, FoH 103

Spring Qtr 1203 Sec 5 T—6-8:30, FoH 103

**Span 1501 CULTURE, CIVILIZATION OF SPAIN, PORTUGAL: THE ROOTS OF MODERN SPAIN, PORTUGAL.** 4 degree credits, \$62. (♦\$31)

Designed to introduce the culture and civilization of Spain and Portugal. The course will include the presentation of audio-visual materials such as art, architecture and music. Knowledge of Spanish not necessary. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 359]. Not to be used for Spanish or Portuguese major credit)

Fall Qtr Sec 1 M—6-8:30, NH 213

**Span 1502 CULTURE, CIVILIZATION OF LATIN AMERICA: INDIAN, EUROPEAN-COLONIAL, AFRICAN ROOTS.** 4 degree credits, \$62. (♦\$31) (IS)

Culture and civilization of Mexico, Central America, and the Spanish Islands of the Caribbean; the influences and fusing of the Spanish with the Indian or the African cultures. Taught in English. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 359])

Winter Qtr Sec 1 M—6-8:30, FoH 202

**Span 3014 SPANISH COMPOSITION AND COMMUNICATION SKILLS: EVERYDAY SPEECH, ARGOT AND DIALOGUE.** 5 degree credits, \$77.50.

A course taught in Spanish and designed to improve the student's ability to comprehend, speak and write Spanish through the use of everyday, high frequency expressions and speech patterns drawn from the living language of Spain and Spanish America. (Prereq 1105 or #)

Fall Qtr Sec 1 Th—6-10:05, FoH 202

Spring Qtr Sec 2 T—6-10:05, FoH 202

**Span 3602 THE PICARESQUE WAY OF LIFE IN SPAIN AND EUROPE: LITERATURE AND THE DELINQUENT.** 4 degree credits, \$62. (♦\$31)

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

Symbols, abbreviations, off-campus class locations begin on page 401.

necessary. May be applied toward the CLA foreign language requirement, Route II for Spanish [see page 359]. (No prereq. Not to be used for Spanish or Portuguese major credit)

**Spring Qtr** Sec 1 **W**—6-8:30, FoIH 103

**Span 3605 POLITICS IN SPANISH AND LATIN AMERICAN LITERATURE.** 4 degree credits, \$62. (♦\$31)

**new**

For students who do not speak Spanish or Portuguese. Novels, plays, and essays as integral parts of historical and political life in Spain, Portugal, Spanish-American countries and Brazil. The civil wars in Spain, the national liberation movements and political upheavals in Latin America. Famous authors from the late 19th century (Galdos) to the present. Taught in English. May be applied toward the CLA foreign language requirement, Route II [see page 359]. (No prereq)

**Fall Qtr** Sec 1 **W**—6-8:30, FoIH 203

**Span 3610 TOPICS: WOMEN IN SPANISH LITERATURE.** 4 degree credits, \$62. (♦\$31)

**new**

The social values and historical events which have shaped the role of women in Spanish society. Some topics of investigation include: witchcraft, Catholicism and the ideal woman, love and sexuality, the defense of women, women and education. Readings include literary and non-literary texts. (No prereq)

**Fall Qtr** Sec 1 **W**—6:20-8:50, FoIH 307, Aldaraca

**Span 3614 DON QUIJOTE: STUDY OF LOST ILLUSIONS.** 4 degree credits, \$62. (♦\$31)

The Spanish classic Don Quijote de la Mancha by Miguel de Cervantes in English. The humor, pathos, and philosophy of Don Quijote, as well as Cervantes' style. (No prereq. May be applied toward the CLA foreign language requirement, Route II, for Spanish or Portuguese [see page 359]. Not to be used for Spanish or Portuguese major credit)

**Winter Qtr** Sec 1 **W**—6-8:30, FoIH 102

**Span 3615 LITERATURE AND FILM.** 5 degree credits, \$77.50. (♦\$38.75)

Artistic techniques and social content of the literature and cinema of the Spanish and Portuguese speaking worlds: Spanish America, Spain, Brazil and Portugal. (No prereq. Not for Spanish or Portuguese major cr. May be applied toward the CLA foreign language requirement, Route II for Spanish or Portuguese)

**Spring Qtr** Sec 1 **M**—6-8:30, FoIH 201

(See other film courses, page 291)

## reading spanish

Span 0221 is specifically designed for individuals who desire only a reading knowledge of the language. The Spanish language requirements for a graduate degree also may be satisfied by successfully passing an examination given at the end of the course. Graduate students should check with their advisers for specific language requirements in their field of study.

**Span 0221 READING SPANISH.** No credit, \$46.50. (IS)

This course is designed solely to impart a basic reading knowledge of the Spanish language; full time is devoted to intensive reading and translation of a variety of texts. Since this approach deals with only one aspect of the language—reading—great skill can be acquired in a short time. At the end of the one quarter the student may take the equivalent of the Spanish Graduate Reading Examination. The department will certify to the Graduate School a reading knowledge of Spanish upon successful completion of this examination. **Must be taken S-N.** (No prereq)

**Winter Qtr** Sec 1 **Th**—6:20-8:50, FoIH 102

Spanish 0221 is offered as a Summer Extension Class.

Symbols, abbreviations, off-campus class locations begin on page 401.

# special education (SpEd)

(Department of Psychoeducational Studies)

*Bruce E. Balow, Professor of Special Education*

*Dewey G. Force, Professor of Special Education*

*Barbara J. Hibbs, Instructor in Psychoeducational Studies*

*H. Uwe Stuecher, Assistant Professor of Special Education*

*Grace J. Warfield, Visiting Associate Professor*

*Frank H. Wood, Professor of Special Education*

**★SpEd 5100 CHILDHOOD LANGUAGE DEVELOPMENT: CLASSROOM IMPLICATIONS.** 3 degree credits, \$51.

Recent trends and findings in the study of language acquisition; classroom implications for the education of exceptional children. **May not be taken S-N.** (No prereq. Limited to 40 students. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 T—7-9:30, Pt 111

**Spring Qtr** Sec 2 M—7-9:30, Pt 102

**★SpEd 5101 EDUCATION OF EXCEPTIONAL CHILDREN.** 3 degree credits, \$51.

Introduction to field of special education for classroom teachers and other school personnel. **May not be taken S-N.** (No prereq. Limited to 35 students. Qualified students may register for graduate credit at the University of Minnesota).

**Fall Qtr** Sec 1 Th—7-9:30, Kellogg HS 167-169, Little Canada; Force

**Spring Qtr** Sec 2 T—7-9:30, Sandburg JHS 214, Golden Valley; Wood

**★SpEd 5105 IMPLEMENTING COURT DECISIONS ON EDUCATION OF THE HANDICAPPED.** 2, 3 or 4 degree credits, \$34, \$51 or \$68.

Analysis of recent litigation and legislation; emphasis on implementation of right to education, right to treatment, labeling, due process, and related issues. **May not be taken S-N.** (No prereq. Limited to 35 students. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 M—6-8:30, Pt 102, Balow

**★SpEd 5112 EDUCATION OF LEARNING-DISABLED CHILDREN.** 3 degree credits, \$51.

Analysis of considerations in design and conduct of services for learning-disabled children; approaches to education of such children. **May not be taken S-N.** (No prereq. Limited to 35 students. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 M—7-9:30, Kellogg HS 237, Little Canada; Balow

**Winter Qtr** Sec 2 T—7-9:30, Richfield HS 251-252, Hibbs

**SpEd 5120 INTRODUCTION TO MENTAL RETARDATION.** 4 degree credits, \$CPsy 5315, \$68.

Issues which relate to educational practices; community planning; educational philosophy, administration and organization, and programming. **May not be taken S-N.** (Prereq SpEd 5101. Meets concurrently with CPsy 5315. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 Th—6:20-8:50, Pt 214, Warfield

**Spring Qtr** Sec 2 Th—6:20-8:50, Pt 214, Warfield

**★SpEd 5155 PSYCHOEDUCATIONAL INTERVENTIONS: PSYCHOTIC CHILDREN.** 3 degree credits, \$51.

Introduction into psychopathology of children with psychotic characteristics; emphasis on psychoeducational intervention programs and teaching strategies. **May not be taken S-N.** (Prereq 12 cr in Psy, CPsy, or SpEd. Limited to 35 students. Qualified students may register for graduate credit at the University of Minnesota).

**Spring Qtr** Sec 1 W—7-9:30, Pt 102, Stuecher

**new**

Symbols, abbreviations, off-campus class locations begin on page 401.

**★SpEd 5180: EDUCATION OF THE DISADVANTAGED.** 3 degree credits, \$51.

Educational needs of children handicapped by behavior related to deficiencies of physical and/or cultural environment; adaptations of educational programs. **May not be taken S-N.** (Prereq 12 cr in psychology, educational psychology or sociology. Limited to 50 students. Qualified students may register for graduate credit at the University of Minnesota).

**Winter Qtr.** Sec 1 **W**—7-9:30, St Paul Technical Vocational Institute

## speech-communication (Spch)

(See also English, General College, Linguistics, Journalism, and Rhetoric)

*Leonard D. Bart, Associate Professor of Speech-Communication*

*Ernest G. Bormann, Professor of Speech-Communication*

*Donald R. Browne, Professor of Speech-Communication*

*Paul H. Cashman, Professor of Speech-Communication*

*Karen J. Garvin, Assistant Professor of Speech-Communication*

*Ronald S. Geizer, Assistant Professor of Speech-Communication*

*William S. Howell, Professor of Speech-Communication*

*Harold A. Miller, 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*

**★Spch 0001C: BEGINNING SPEECH-COMMUNICATION.** 3 certificate credits, \$46.50 plus \$5.50 special fee. Total \$52

Designed particularly for the adult student who wants a practical application of speech-communication techniques to his professional business and social needs. Planned to develop confidence and effectiveness in day-to-day speaking situations. Individual attention is given to every student. Each student speaks before the class each meeting. When possible, a session before live television cameras is provided each student. (No prereq. Limited to 25 students)

**Fall Qtr** Sec 1 **M**—6:20-8:50, NH 216, Woods

**Winter Qtr** Sec 2 **M**—6:20-8:50, NH 216, Woods

**Spring Qtr** Sec 3 **M**—6:20-8:50, NH 216, Woods

**★Spch 1101: FUNDAMENTALS OF SPEECH COMMUNICATION: ORAL COMMUNICATION.** 4 degree credits, \$62.

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 306, Bart

Sec 2 **Th**—6:20-9, Kellogg HS 233, Little Canada

**Winter Qtr** Sec 3 **T**—6:20-8:50, FolH 306, Garvin

**Spring Qtr** Sec 4 **W**—7-9:20, Irondale HS 105, New Brighton

**Spch 1102: FUNDAMENTALS OF SPEECH-COMMUNICATION: COMMUNICATION PROC-  
ESS.** 4 degree credits, \$62. (◆\$31)

Introduction to the identification and analysis of variables in intrapersonal, interpersonal, and group communication. (No prereq)

**Spring Qtr** Sec 1 **T**—6:20-8:50, FolH 107, Garvin

**Spch 1104: FUNDAMENTALS OF SPEECH-COMMUNICATION: THE CREATIVE PROCESS  
AND THE MASS MEDIA.** 4 degree credits, \$62. (◆\$31)

Presentation of film, television and radio material to highlight historical and critical understanding of these media. Problems faced by artists involved in the production-presentation process. (No prereq)

**Fall Qtr** Sec 1 **W**—6:20-8:50, NH 45, Bart

Symbols, abbreviations, off-campus class locations begin on page 401.

**★Spch 3201 INTRODUCTION TO BROADCASTING PRODUCTION.** 4 degree credits, \$62.

Fundamentals of practice and theory in radio and television. Emphasis on projects and exercises in performance and scripting; introduction to studio equipment and procedures. Historical and sociological aspects of broadcasting. (No prereq. Limited to 25 students)

**Winter Qtr** Sec 1 **W**—6:20-8:50, RarigC 616, Bart

**Spch 3211 DETERMINANTS OF BROADCAST PROGRAMMING.** 4 degree credits, \$62.

Historical development and contemporary aspects of broadcast programming. Roles of governmental, industrial, and public organizations in influencing program decisions. "Problem" areas in programming. (No prereq)

**Spring Qtr** Sec 1 **M**—6:20-8:50, FoIH 306, Browne

**Spch 3401 THEORIES OF INTERPERSONAL COMMUNICATION.** 4 degree credits, \$62. (◆\$31)

Analysis of various theories of interpersonal communication and their usefulness for particular purposes. (Prereq 1102, Psy 1001 or §)

**Fall Qtr** Sec 1 **M**—6:20-8:50, FoIH 406, Geizer

**Winter Qtr** Sec 2 **M**—6:20-8:50, FoIH 406, Geizer

**★Spch 5411 SMALL GROUP COMMUNICATION.** 5 degree credits, \$85.

Study of communication and dynamics within the small, task-oriented group. Cohesiveness, leadership, role structure, information processing and decision making. **A-N registration only.** (Prereq 3641 or §. Limits indicated below. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 **T**—6:20-8:50, FoIH 304, Cashman (Limit 25 students)

**Winter Qtr** Sec 2 **TTh**—4:15-6, FoIH 406, Cashman (A joint Day/Extension class limited to 10 Extension students [plus day school registrants])

**★Spch 5414 AUTHORITY AND POWER IN TASK-ORIENTED COMMUNICATION.** 4 degree credits, \$68.

Authority and power in task-oriented groups. Tavistock-type small group, intergroup and large group laboratory experiences. Verbal and nonverbal processes which operate in and among groups to facilitate or inhibit effective leadership and followership. *S-N registration only.* (A joint Day/Extension course limited to 10 Extension students [plus day school registrants]. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 **TTh**—4:15-6, FoIH 306, Miller

**Spring Qtr** Sec 2 **MW**—4:15-6, FoIH 406, Cashman

**★Spch 5421 QUANTITATIVE RESEARCH IN COMMUNICATION.** 4 degree credits, \$68.

Review and discussion of experimental and descriptive research; analysis of research and design and procedures; individual research projects. (Prereq 3401 or 5403, or §. A joint Day/Extension course limited to 10 Extension students. [plus day school registrants]. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 **MW**—4:15-6, FoIH 304, Geizer

**★Spch 5422 INTERVIEWING AND COMMUNICATION.** 4 degree credits, \$68.

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 10 Extension students [plus day school registrants]. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 **MW**—4:15-6, FoIH 306, Rarick

**Spch 5431 THE PROCESS OF PERSUASION.** 4 degree credits, \$68.

Theories of modern motivational communication. Analysis of the process of social

Symbols, abbreviations, off-campus class locations begin on page 401.



control through persuasive speech. (Prereq 1102 or Psy 1001. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 **Th**—6:20-8:50, FolH 306, Miller

★**Spch 5441 COMMUNICATION IN HUMAN ORGANIZATIONS.** 4 degree credits, \$68.

Analysis of functions of communication in organizational settings. Organizational structure and dynamics and their effect upon communication process. Collateral readings and individual projects. (Prereq 1102 or 3401, 3641 or 5411, or grad. A joint Day/Extension course limited to 10 Extension students [plus day school registrants]. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 **MW**—4:15-6, FolH 308, Shapiro

★**Spch 8411 SEMINAR: SMALL GROUP COMMUNICATION.** 3 degree credits, \$69.

Research problems and methods in small group communication. (Prereq 1101, 5411. A joint Day/Extension course limited to 5 Extension students [plus day school registrants]. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 **T**—4:15-6, FolH 306, Bormann

★**Spch 8423 SEMINAR: SEXUAL COMMUNICATION.** 3 degree credits, \$69.

Designed for persons who will work in professional settings in which significant sexual communication is likely to occur. Human sexual communication in interpersonal, management and various professional settings will be examined. (No prereq. A joint Day/Extension course limited to 5 Extension students [plus day school registrants]. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 **MW**—4:15-6, FolH 306, Cashman

★**Spch 8441 SEMINAR: ORGANIZATIONAL COMMUNICATION.** 3 degree credits, \$69.

Directed projects in the study of organizational communication. Emphasis placed on studies conducted in real or simulated organizations. (Prereq 5441 or \*. A joint Day/Extension course limited to 5 Extension students [plus day school registrants]. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Qtr** Sec 1 **MW**—4:15-6, FolH 306, Shapiro

★**Spch 8621 SEMINAR: HISTORY AND CRITICISM OF PUBLIC ADDRESS.** 3 degree credits, \$69.

Methods of rhetorical criticism. Application of method in individually selected research projects. (Prereq 5617, 5618 or \*. A joint Day/Extension course limited to 5 Extension students [plus day school registrants]. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 **Th**—4:15-6, FolH 307, Bormann

## student project for amity among nations (SPAN)

Language courses offered by SPAN are listed under Foreign Studies. SPAN provides unusual opportunities for undergraduate study abroad through a unique summer research project conducted in three or four different countries each year. In 1977, four groups, each with an academic adviser who is an expert on the country concerned, will go to Fiji, Greece, Ireland, and Peru. Participants are selected a year prior to their summer abroad and undergo a nine-month orientation in the language and culture of their selected country. For further information, contact SPAN, 103 Nolte West, University of Minnesota, Minneapolis, Minnesota 55455 (373-3793).

Symbols, abbreviations, off-campus class locations begin on page 401.

## study skills

(See also Rhetoric; General College; and other study helps, page 305)

## personal orientation (PO)

**A student who does not attend the first class meeting of a PO course will not be allowed to continue. A written verification of non-attendance must be obtained from the instructor for a student to receive a 100% tuition refund.**

**★PO 1001 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.) \$46.50 plus \$2 course fee. Total \$48.50. (IS)

Practical assistance to the student in developing efficient study habits, organizing materials, preparing for examinations, and improving the speed and comprehension of reading. Diagnosis and practice in basic skill areas such as reading, spelling, vocabulary and elementary composition are also provided. (No prereq. Limited to 30 students)

<b>Fall Qtr</b>	Sec 1	T—6:20-8:50, EdH 102
<b>Fall Sem</b>	Sec 2	M—6:20-8, EdH 102
<b>Winter Qtr</b>	Sec 3	W—6:20-8:50, EdH 102
<b>Spring Sem</b>	Sec 4	T—6:20-8, EdH 102
<b>Spring Qtr</b>	Sec 5	M—6:20-8:50, EdH 102

## swedish

(See Scandinavian Languages)



## textiles and clothing (TexC)

(See also Home Economics)

*Marilyn DeLong, Assistant Professor of Textiles and Clothing*  
*Robert F. Johnson, Professor of Textiles and Clothing*

Symbols, abbreviations, off-campus class locations begin on page 401.

**★TexC 3643 FASHION MERCHANDISING.** 5 degree credits, \$77.50.

new

Study of merchandise selection and controls, sales analysis, model stocks, and buying plans. (Retail merchandising of soft goods. Course would benefit persons seeking promotion to management positions) (Prereq TexC 1641, Mktg 3065 or †. Limited to 30 students.)

**Spring Sem** Sec 1 T—6:20-9:40, McNH 69, StP Campus

**★TexC 5603 EXPERIMENTAL STUDIES IN CLOTHING CONSTRUCTION.** 3 degree credits, \$51 plus \$5 course fee. Total \$56.

new

Comparative study of selected procedures in clothing construction relative to areas of construction and fabric differences. Materials evaluated for teaching on different educational levels. (Prereq 6 credits in clothing construction, teaching experience, or †. Limited to 20 students. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Sem** Sec 1 M—6:20-9:40, McNH 470, StP Campus, DeLong

**TexC 5622 ISSUES, TRENDS IN TEXTILE CONSUMER PROBLEMS.** 3 degree credits, \$51.

The needs of the textile consumer for protection from deception and hazard; critical analysis of federal, state, and local legislation as well as voluntary industrial systems; case histories; change mechanisms. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Qtr** Sec 1 W—6:20-8:50, McNH 33, Johnson

## theatre arts (Th)

(See also Engl 5910, Plays of the Guthrie Season; and WoSt 3502, Women and the Arts)

*Arthur H. Ballet, Professor of Theatre Arts*

*C. Lance Brockman, Assistant Professor of Theatre Arts*

*Jennis Harris, Visiting Instructor*

*Dennis Maganza, Teaching Assistant*

*Barbara McIntyre, Assistant Professor of Theatre Arts*

*Elizabeth Nash, Assistant Professor of Theatre Arts*

*Peggy O'Connell, Instructor in Theatre Arts*

**Th 1101 INTRODUCTION TO THE THEATRE.** 4 degree credits, \$62. (♦\$31)

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. Spring quarter only: discussion during first 45 minutes is on production materials and elements, acting, directing, and specific discussion of selected plays running in the Twin Cities. (No prereq)

**Fall Qtr** Sec 1 T—6-8:50, SciCB 125, Ballet

**Spring Qtr** Sec 2 M—6-8:50, SciCB 125, Ballet

**★Th 1321 BEGINNING ACTING: CREATIVE APPROACH.** 4 degree credits, \$62.

Creation and presentation of original scenes and exercises. Ability to respond to the imaginative situation with individuality and effectiveness stressed. (Prereq 1504 or †1504. Limited to 24 students)

**Fall Qtr** Sec 1 Sa—9:15 a.m.-12:00, RarigC 10, Harris

**Th 1328 MIME AND THE ACTOR.** 2 degree credits, \$31.

Basic techniques and the domain of mime explored through class participation. (Prereq 1321)

**Spring Qtr** Sec 1 Sa—9:15 a.m.-12, RarigC 10, Maganza

Symbols, abbreviations, off-campus class locations begin on page 401.

**Th 1502 MAKEUP FOR THE ACTOR.** 2 degree credits, \$31.

The art of stage make-up. (Prereq 1504)

**Winter Qtr** Sec 1 **Th**—6:20-8:50, RarigC 45

**Th 1504 ELEMENTS OF TECHNICAL THEATRE.** 4 degree credits, \$62.

The practice of the arts and crafts of the theatre; scenery and particularly construction and painting, stage operation, theatre lighting, costumes, or makeup. (Prereq 1101 or 11101. Further sessions will be scheduled at first class meeting)

**Fall Qtr** Sec 1 **F**—6:30-10:30, RarigC 275, Brockman

**Winter Qtr** Sec 2 **F**—6:30-10:30, RarigC 616, Brockman

**Th 3311-3312 VOICE PRODUCTION FOR THE THEATRE.** 2 degree credits each quarter. \$31 plus \$4 special fee. Total \$35 each quarter.

Physical exercises designed to free the human voice from unnecessary inhibitions and tensions. Work on prose, poetry, and drama. Vocal exercises with piano. (Prereq 1321 or 11321 for 3311; 3311 for 3312)

**new**

**Fall Qtr** 3311 Sec 1 **T**—6:30-7:30, MacP, Nash

**Winter Qtr** 3312 Sec 2 **T**—6:30-7:30, MacP, Nash

**Spring Qtr** 3311 Sec 3 **T**—6:30-7:30, MacP, Nash

**Th 3321 ADVANCED ACTING.** 4 degree credits, \$62.

Presentation of scenes from great plays. (Prereq 1326)

**Winter Qtr** Sec 1 **Sa**—9:15 a.m.-12, RarigC 10, McIntyre

**\*Th 5131 CREATIVE DRAMATICS.** 4 degree credits, \$68 plus \$2 special fee. Total \$70.

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 \*. Limited to 25 students. Qualified students may register for graduate credit at the University of Minnesota)

**Winter Qtr** Sec 1 **T**—4-7:30, Marshall-University HS, O'Connell

**Spring Qtr** Sec 2 **T**—4-7:30, Marshall-University HS, O'Connell

(See also Education)

**Th 5718 THEATRE MANAGEMENT AND PROMOTION.** 4 degree credits, \$68.

Theory and practice in ticket office procedures, house management, publicity, and promotion; special problems in college, community, children's and professional theatre. (Prereq 1504, sr cr grad or \*. Qualified students may register for graduate credit at the University of Minnesota)

**new**

**Spring Qtr** Sec 1 **M**—6:20-8:50, BlegH 440, Loppnow

## transportation (Tran)

*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*

**Transportation courses may not be taken S-N.**

**\*Tran 3054 FUNDAMENTALS OF TRANSPORTATION.** 4 degree credits, \$8154, \$62.

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. **May not be taken S-N.** (Prereq Econ 1002 or equiv. Limited to 40 students)

**Fall Qtr** Sec 1 **M**—5:30-8:00, BlegH 225, Harper

Sec 2 **W**—5:30-8:00, AndH 350, Rakowski

Symbols, abbreviations, off-campus class locations begin on page 401.

- Winter Qtr** Sec 3 **M**—5:30-8:00, BlegH 125, Harper  
 Sec 4 **W**—5:30-8:00, AndH 310, Rakowski  
**Spring Qtr** Sec 5 **M**—5:30-8:00, AndH 210, Harper  
 Sec 6 **W**—6-8:30, Richfield HS 249-250, Rakowski

**Tran 3064 BUSINESS LOGISTICS.** 5 degree credits, \$8264, \$77.50.

Control of the flow of physical product by the firm. Topics include rate negotiation, transportation alternatives, logistics information systems, inventory control, warehouse operations and location, and logistics system design. Meets concurrently with 8264. **May not be taken S-N.** (Prereq 3054. For graduate credit register in 8264)

**Fall Sem** Sec 1 **W**—5:30-8:00, BlegH 115, Beier

**Tran 3084 CARRIER MANAGEMENT.** 5 degree credits, \$8284, \$77.50.

Managerial problems of carriers by rail, highway, air, and water. Topics include problems associated with carrier organization, operations, traffic and sales, finance and control, labor relations, public policy issues, and shipper-carrier interface. **May not be taken S-N.** (Prereq Tran 3054. Meets concurrently with 8284. For graduate credit register in 8284)

**Spring Sem** Sec 1 **W**—5:30-8:00, BlegH 350, Beier

**Tran 8264 BUSINESS LOGISTICS.** 5 degree credits, \$3064, \$115.

See course description for 3064. Meets concurrently with 3064. **May not be taken S-N.** (Prereq 3054 or 8154. Qualified students may register for graduate credit at the University of Minnesota)

**Fall Sem** Sec 1 **W**—5:30-8:00, BlegH 115, Beier

**Tran 8234 CARRIER MANAGEMENT.** 5 degree credits, \$3084, \$115.

See course description for 3084. Meets concurrently with 3084. **May not be taken S-N.** (Prereq 3054 or 8154. Qualified students may register for graduate credit at the University of Minnesota)

**Spring Sem** Sec 1 **W**—5:30-8:00, BlegH 350, Beier



**university college (UC)**

**UC 3302 SCIENCE AND SOCIETY.** 4 degree credits, \$5302. \$62.

This is the first in a two quarter sequence focused upon the alleged conflict between the sciences and the humanities. Consists of a detailed examination of what can be meant by "interdisciplinary knowledge," with the problematic relationship between the "scientific" and "humanistic" sectors as a case in point. An attempt is made to achieve clear and decisive statements of the assumed conflict. We then turn to broad-scale "solutions" of the "two culture" problem, i.e., Bronowski, *Science of Human Values*; A. Huxley, *Literature and Science*; Polyani, *Personal Knowledge*; Pirsig, *Zen and the Art of Motorcycle Maintenance*; and other works. Meets concurrently with 5302. (No prereq)

**Fall Qtr** Sec 1 **T**—6:20-8:55, Ph 157

new

**UC 3303 SCIENCE AND SOCIETY.** 4 degree credits, \$5303. \$62.

Examines selected issues raised by the relation between science and its social problems: on the one hand, the "Bronowski-Snow" thesis which argues that the social and ethical values of scientists derive from their intrinsic activities as scientists, while on the other hand, the view of e.g., Mills, Rose and Rose, etc., that independent political and economic factors shape their value orientations. Read-

new

Symbols, abbreviations, off-campus class locations begin on page 401.

ings include Ravetz, *Scientific Knowledge and the Social Problems*, Mills, *The Cultural Apparatus*, Snow, *The Moral Un-Neutrality of Science*; Glass, *The Ethical Basis of Science*; Rose & Rose, *The Myth of The Neutrality of Science*; and other works. Meets concurrently with 5303. (No prereq)

Winter Qtr Sec 1 T—6:20-8:55, Ph 157

**UC 5302 SCIENCE AND SOCIETY.** 4 degree credits, \$3302. \$68.

See description for 3302. (No prereq. Meets concurrently with 3302. Qualified students may register for graduate credit at the University of Minnesota)

**new**

Fall Qtr Sec 1 T—6:20-8:55, Ph 157

**UC 5303 SCIENCE AND SOCIETY.** 4 degree credits, \$3303. \$68.

See description for 3303. (No prereq. Meets concurrently with 3303. Qualified students may register for graduate credit at the University of Minnesota)

**new**

Winter Qtr Sec 1 T—6:20-8:55, Ph 157

## urban affairs

(See Public Policy)

## urban studies (UrbS)

(See also Public Affairs; Public Policy; GC 1212, Urban Problems; GC 3285, Anthropology of the City; GC 3292, Urban Problems—Geographic Perspectives; Pol 1027, Urban Politics; Soc 3601, Urban Community, and Soc 5601, Urban Sociology)

*Judith Martin, Lecturer in Urban Studies*

*Michael P. Murphy, Lecturer in Urban Studies*

**★UrbS 3101 URBAN STUDIES COLLOQUIUM.** 2 degree credits, \$31.

This colloquium will attempt to explore our perceptions of urban space. The course will focus on design elements which make up the American city with some attention to the problem of spatio imagery. The design implications of certain kinds of neighborhoods; the role of factors such as architecture and open space in determining spatial perceptions. **Must be taken S-N.** (No prereq. Limited to 20 students)

**new**

Fall Qtr Sec 1 W—6:20-8:50, BlegH 360

**UrbS 3500 WORKSHOP IN AMERICAN URBAN ETHNICITY.** 4 degree credits each quarter, \$62 each quarter.

The workshop will examine the following: traditional models of urban ethnic assimilation and their weaknesses; the rise of the "new ethnic politics" as a factor in urban political and social behavior. Some emphasis will also be given to the history and make-up of particular ethnic groups locally (ex., the Italians in Minneapolis, the Spanish-speaking community of St. Paul, etc.). Fieldwork will include optional oral, local or informal histories of ethnic neighborhoods. (No prereq)

**new**

Winter Qtr Sec 1 T—6:20-8:50, BlegH 350, Murphy

Symbols, abbreviations, off-campus class locations begin on page 401.



## 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, \$46.50.

Lectures and demonstrations by faculty members of the College of Veterinary Medicine and qualified well-known authorities on horses and horsemanship from the metropolitan area. (No prereq)

**Spec Term** Sec 1 **Th**—Jan 6-April 28, 7:30-9:30, AnSci-VetMed 125,  
Hanson, Mather (coordinators)  
(See Winter quarter registration dates, page 17.  
No late fee through Dec. 31)

## vocabulary building

(See General College communication skills)

## vocational and technical education

Continuing education courses for in-service vocational and practical arts teachers are offered on campus during late afternoons and off-campus through Continuing Education and Extension in the following programs:

- Agricultural Education
- Business Education
- Distributive Education
- Home Economics Education
- Industrial Education
- Vocational Education

Late afternoon classes are scheduled each quarter and are listed in the day school **Class Schedule**. Continuing Education and Extension courses for vocational certification and degree programs are scheduled at the request of and in cooperation with vocational program administrators. Requests for information about specific courses to be provided through Continuing Education and Extension should be directed to Special Services, 125 Peik Hall, University of Minnesota, Minneapolis, Minnesota 55455 (373-5050).

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## women's studies (WoSt)

(See also IC 0008, Woman's Role, Women's Lives; IC 0013, Women and Language Workshop; IC 0014, Contemporary Women Poets; Psy 5141, Psychology of Women)

*Pat Faunce, Associate Professor of Psychology*

*Mary Jo Kingston, Instructor in Women's Studies*

*Toni McNaron, Coordinator of Women's Studies*

*Miriam Roshwald, Assistant Professor in Women's Studies*

*Sue Short, Assistant Professor in Women's Studies*

*Gyle Graham Yates, Assistant Professor in Women's Studies*

**WoSt 1005, 1006 INTRODUCTION TO WOMEN'S STUDIES.** 4 degree credits, each quarter, \$62 plus \$3 course fee. Total \$65 each quarter. (◆\$31 plus \$3 course fee. Total \$34) (IS 1005)

◆ Brief history of feminism, nationally and locally; survey of women's issues; survey of biological and/or learned behaviors. (No prereq)

**Fall Qtr 1005 Sec 1 M—6:20-8:50, ForH 120, Magnusen, McVeigh**

**Winter Qtr 1006 Sec 2 M—6:20-8:50, ForH 120, Magnusen, McVeigh**

**WoSt 1977 THE PSYCHOLOGICAL ENVIRONMENT OF WOMEN.** 4 degree credits, \$62. (◆\$31) (IS)

◆ An examination of psychological principles and theories which have a unique application to the development, growth, and behavior of women; to inform and to contribute to the woman's awareness of where she is now and how she got there; to foster self-actualization of the young woman. (No prereq)

**Winter Qtr Sec 1 W—6:20-8:50, ForH 120, Faunce**

**WoSt 3001 WOMEN: BIOLOGY AND BEHAVIOR.** 4 degree credits, \$62 plus \$3 course fee. Total \$65. (◆\$31 plus \$3 course fee. Total \$34)

◆ Course to educate women and men about biological aspects of being a woman. Combines material from several disciplines rather than following any specific disciplinary approach. (Prereq Biol 1011 or Phsl 1001 or Psy 1001)

**Fall Qtr Sec 1 T—6:20-8:50, ForH 285, Kingston**

**★WoSt 3103 THE MODERN FEMINIST NOVEL.** 4 degree credits, \$62. (◆\$31)

◆ Selected twentieth-century novels by British and American women. (Prereq English comp or equiv. Limited to 30 students)

**Spring Qtr Sec 1 W—6:20-8:50, ForH 285, Wanhala**

**★WoSt 3301 WOMEN: SENSE OF IDENTITY.**

**new** Offered fall, winter, spring by Continuing Education for Women. Call 373-9743 or write 200 Wesbrook Hall, University of Minnesota 55455.

**★WoSt 3302 COMPARATIVE STUDY OF WOMEN: SOCIAL SCIENCE PERSPECTIVE.** 4 degree credits, \$62. (◆\$31) (IS)

◆ Investigation in some detail and depth of comparative treatment and theories of women from two separate social science disciplinary points of view. Includes theoretical views, research methods for asking questions about women, basic readings combining discipline and Women's Studies. (Prereq intro courses in 1-2 social sciences. Limited to 30 students.)

**Spring Qtr Sec 1 Th—6:20-8:50, ForH 285, Gudeman**

Symbols, abbreviations, off-campus class locations begin on page 401.



**★WoSt 3501. WOMEN AND LITERATURE.** 4 degree credits, \$62.

An investigation in some detail and depth of the position of women, white and non-white, as writers and critics as well as subjects for other writers. Usually limited to western cultures' literature. (Prereq introductory work in literature. Limited to 30 students)

Winter Qtr Sec 1 T—6:20-8:50, ForH 285

**WoSt 3502. WOMEN AND THE ARTS.** 4 degree credits, \$62. (◆\$31)

Investigation in some detail and depth of position of women, white and non-white, as performing artists as well as subjects for other performing artists. Focus will vary among such arts as visual arts, music, dance, film, theatre, etc. (Prereq intro work in music, art, drama, dance, or film)

Winter Qtr Sec 1 Th—6:20-8:50, ForH 120, Ultan

**WoSt 3910. TOPICS IN WOMEN'S STUDIES: WOMEN IN THE OCCUPATIONAL STRUCTURE.** 4 degree credits each quarter, \$62 each quarter. (◆\$31)

Effect of occupational structure upon women's self concept, life chances, place in social order. Topics include: American occupational structure, work and self, occupational choice, congruence and incongruence of sex roles and feminine life cycle with structural characteristics of occupations, etc. (Prereq Soc 1001 or Anth 1002 or ♯. Meets concurrently with 5910 sec 1)

Fall Qtr Sec 1 T—6:20-8:50, ForH 349, Bennett

**WoSt 3910. TOPICS IN WOMEN'S STUDIES: SEXISM IN EDUCATION.** 4 degree credits each quarter, \$62 each quarter. (◆\$31)

Examination of psychological theories of sex differences between girls and boys, history of sex-role stereotyping, institutional factors in sex-role stereotyping, social values reflected in textbooks, training programs for prospective classroom teachers. (No prereq. Meets concurrently with 5910 sec 2)

Spring Qtr Sec 2 Th—6:20-8:50, ForH 115

**WoSt 5910. TOPICS IN WOMEN'S STUDIES: WOMEN IN THE OCCUPATIONAL STRUCTURE.** 4 degree credits each quarter, \$68 each quarter.

See description for 3910 sec 1. (Prereq Soc 1001 or Anth 1002 or ♯. Meets concurrently with 3910 sec 1. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 T—6:20-8:50, ForH 349, Bennett

**WoSt 5910. TOPICS IN WOMEN'S STUDIES: SEXISM IN EDUCATION.** 4 degree credits each quarter, \$68 each quarter.

See description for 3910 sec 2. (No prereq. Meets concurrently with 3910 sec 2. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 2 Th—6:20-8:50, ForH 115

**WoSt 5311. WOMEN AND THE LAW.** 4 degree credits, \$68 plus \$5 course fee. Total \$73. (◆\$34 plus \$5 course fee. Total \$39)

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)

Winter Qtr Sec 1 Th—6:20-8:50, ForH 285, Short

## world affairs

For information on non-credit conferences or workshops in world affairs, please contact William C. Rogers, 306 Westbrook Hall; telephone 373-3709.

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## youth studies (YoSt)

(See also Education and Continuing Education in Social Work)

*Michael Baizerman, Associate Professor of Youth Studies*

*Willis Bright, Assistant Professor of Youth Studies*

*Dan Conrad, Teacher, Hopkins Eisenhower High School*

*Diane Hedin, Instructor in Youth Studies*

*Miriam Pew, A.C.S.W.*

*Miriam Seltzer, Assistant Professor and Coordinator for Youth Studies*

**YoSt 5120 INDEPENDENT STUDY IN YOUTH STUDIES.** Cr arr. (maximum 12 cr). \$17 per credit.

Independent reading and/or research under faculty supervision. (Prereq †. Qualified students may register for graduate credit at the University of Minnesota)

**new**

**Fall Qtr** Sec 1 Arr., Seltzer

**Winter Qtr** Sec 2 Arr., Seltzer

**Spring Qtr** Sec 3 Arr., Seltzer

**YoSt 5131 PROGRAM AND SERVICES FOR YOUTH.** 3 degree credits, \$51.

Analysis of main types of youth-serving organizations. Includes national and local organizations both voluntary and public with emphasis on agency philosophy, goals, program, funding and development, staffing patterns. Examples from Minnesota. Agencies in juvenile justice, health, recreation and education care included. A joint Day/Extension class. (Prereq SW 3102, Soc 5952, CPsy 5303 or †. May not be taken for graduate credit.)

**new**

**Fall Qtr** Sec 1 T—1:15-3:45, ClaOff 27, StP Campus, Bright

**YoSt 5132 ACTION LEARNING FOR YOUTH.** 3 degree credits, \$51.

Course will cover (1) purposes of service and action-learning in schools and youth-serving agencies. (2) the development and implementation of programs in which adolescents are performing valued service and work in their communities and (3) Evaluation of action-learning programs. A Minneapolis school setting will be selected at the first meeting. A joint Day/Extension class. (Prereq SW 5131, HED 3090, CPsy 5303, †. YoSt 5131 recommended. May not be taken for graduate credit.)

**new**

**Fall Qtr** Sec 1 W—4-6, first mtg AgEng, StP Campus, Hedin, Conrad

**Spring Qtr** Sec 2 W—4-6, first mtg AgEng, StP Campus, Hedin, Conrad

**\*YoSt 5133 YOUTH AND HEALTH.** 3 degree credits, \$51.

A basic course on the medical and health status of youth. Examination of age-specific morbidity and mortality data re youth. Introduction of youth development concepts for use in sociomedical and sociohealth problem analysis and program development. (Prereq Soc 1001, CPsy 5303, PH 3004, YoSt 5131 or †. A joint Day/Extension class limited to 25 Extension students. Qualified students may register for graduate credit at the University of Minnesota)

**new**

**Winter Qtr** Sec 1 T—9:15 a.m.-11, HSUnitA 2-583, Baizerman

Three courses will be offered in 3-day intensive workshops by Continuing Education in Social Work: **YoSt 5230, 5231, 5232—Work With Youth: Individual, Families and Groups.** Specific information is available at 321 Nolte Center, University of Minnesota, Minneapolis, MN 55455 (373-5831).

# general information

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## faculty

The teaching staff in Extension Classes consists primarily of University of Minnesota faculty. In some instances, faculty members from other educational institutions and specialists in professional and business fields have been selected to teach courses. All Extension Classes instructors are approved by the academic departments through which classes are offered.

**Additional staff**—Faculty other than those listed under each department may be assigned to teach certain courses.

## funding of the extension classes program

While the state legislature has begun to help fund Continuing Education and Extension, the Extension Classes program—including instructional, administrative and staff costs and related costs—is supported mainly by students' tuition. Therefore, depending on overall enrollments, program adjustments are sometimes necessary, as is the cancellation of classes in which enrollment is low.

## campus activities, services and facilities

### art rentals

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. Original posters may be purchased for \$1.04 each. 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 located in M-16 Northrop Auditorium (one flight up from the northwest corner of Northrop). The cost is \$1.35 a composition plus sales tax a quarter. After the open rental period, students may rent compositions by appointment only. Telephone 373-5685 for further information.

### 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 \$4.49 a quarter or \$6.74 a semester, but is subject to change, and can be paid at the time of registration.

The athletic facilities include pools, gymnasiums, skating rink, tennis courts, fields, diamonds, track, and golf courses. However, there is a separate user charge for the ice rink, tennis courts and golf courses. Separate locker and towel rental is also available.

Payment of the fee entitles the student to use the facilities during the term for which he or she is registered, except that students registered for Spring Quarter or Spring Semester may use the facilities during the summer until the opening date of Welcome Week (September 22, 1976). Since facilities are heavily used, often to capacity, their use may be restricted occasionally.

The fee is paid in the Extension Classes office and will be entered on a receipt separate from the fee statement. Students must present this receipt when they wish to use the facilities. If students cancel classes, they must surrender the facility fee receipt at the time of cancellation. The athletic facilities fee will not be refunded after the second week of classes. No refund will be made without surrender of the athletic facilities fee statement.

## athletic tickets

University students carrying 3 credits or more are eligible to purchase student athletic tickets for men's intercollegiate athletic events. The football ticket, which includes swimming, wrestling, track, gymnastics and baseball, is \$18. The first home game on September 11 with Indiana University, will offer general admission seating in student sections 7 through 9. Reserved tickets with specific seat assignments will be assigned for the other five home games. Reserved tickets will be available for pick up during Welcome Week, September 22 through 26.

Hockey season tickets will go on sale starting September 29. The reserved tickets for the 18-game season are \$26 and general admission season tickets are \$18.

Basketball season tickets will be reserved seating only in the A, B, and C decks. The 13-game ticket will cost \$26. Tickets go on sale October 1.

For details on purchasing student tickets, please visit the Athletic Ticket Office, Bierman Field Athletic Bldg., 373-3181. Hours are 9 a.m. to 5 p.m. Monday through Friday.

Any student enrolled for at least three credits in Extension Classes may purchase one student athletic ticket under any of all of the following plans:

**Plan No. 1—\$15.50 FOOTBALL TICKET.** Admits to all home, regularly scheduled games (six games); All games will have reserved seating. Also admits to all home, regularly scheduled home baseball, gymnastics, swimming, track and intercollegiate events—general admission seating. Information available at the Athletic Ticket Office. For information call 373-3181.

**Plan No. 2—BASKETBALL TICKET.** Admits to all home, regularly scheduled intercollegiate basketball games. General admission and reserved seating available. Prices not established at press time.

**Plan No. 3—HOCKEY TICKET.** Admits to all home, regularly scheduled intercollegiate hockey games. Reserved seating available in a designated section. Prices not established at press time.

**Plan No. 4—SWIMMING, GYMNASTICS, TRACK, WRESTLING AND BASEBALL TICKET.** Admits to all home, regularly scheduled intercollegiate events in these five sports. General admission and reserved seating available. Prices not established at press time.

Married students may purchase a second athletic ticket for their 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 ticket is 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 based on the refund schedule noted on the ticket.

**When and Where to Purchase Football (Plan No. 1) Ticket in Advance:** At Bierman Field Athletic Building lobby, 15th Ave. at 5th St. S.E. from Monday, Sept. 20 through Friday, Sept. 24. At Williams Arena Saturday, Sept. 25.

Hours—9 a.m.-4 p.m. daily, except Saturday, Sept. 25, from 11 a.m.-noon. Athletic ticket sales will continue at Bierman Field Athletic Building after Sept. 22.

**Sale of Plans No. 2, 3 and 4:** The special plans will be on sale September 22. Call for details at that time.

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

### 1976 Home Football Schedule

Sept. 11 Indiana	Oct. 9 Illinois
Sept. 18 Washington State	Oct. 23 Iowa
Sept. 25 Western Michigan	Nov. 13 Ohio State

**Advance Spring Sale:** Each spring an advance sale is conducted whereby students may apply for athletic tickets under Plan No. 1, to be picked up at Bierman Field Athletic Building during Welcome Week in September. No proof of enrollment is required to order in the spring. Some form of proof of student status, such as a completed registration form, however, must be presented to claim ticket in the fall. NOTE: After Sept. 25, a paid fee statement will be required for all student ticket transactions. Students who register by mail will receive their fee statements by return mail in the order in which registrations are processed. If the adjacent seat is purchased for the spouse, proof of marriage is required. Application may be made by mail in the spring sale. For an application, call the Athletic Ticket Office (373-3181).

**Extension students may NOT pick up fee statements in advance at Wesbrook Hall. All fee statements will be mailed to students once payments have been recorded. No exceptions will be made.**

## 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 Wesbrook Hall, no later than the last day of in-person registration during any term (see **When and How to Register**).

By the second week of the term you will receive a computer print-out which lists the names, addresses, telephone numbers and e-mail addresses 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 Services Office (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 the Boynton Health Service benefits. The cost of the service (\$31 a quarter or \$46.50 a semester) entitles students to use the Boynton Health Service (see East Bank campus map in this **Bulletin**).

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

Medical care and health counseling are provided to students who pay the above fee. No charge is made for general care or for consultations with a specialist on physical or mental health problems. Intensive investigation and/or treatment of pre-existing, chronic conditions are **not** covered by the Health Service; however, such services may be arranged for, but at the student's expense.

Fee-paying students also receive diagnostic laboratory and x-ray services up to \$100 a quarter; needed diagnostic procedures costing more than this amount which are not collectable from the student's private insurance are the student's obligation. Physical therapy and x-ray therapy are provided up to a limit of \$250 a quarter. Charges are made on a cost basis for prescription drugs, glasses, and dentistry.

**The Boynton Health Service fee does not include hospitalization benefits nor coverage for services related to hospitalization including surgery.** Students who

have this type of coverage will be expected to provide the name of the insurance carrier along with their group and contract numbers at the time of registration. Students who do not have private hospitalization and surgical coverage, including benefits for inpatient medical care, must complete an application form for this coverage at the time of registration; the premium for this coverage, along with the Health Service fee of either \$31 or \$46.50, will be paid in Extension Classes and will be entered on a receipt separate from the fee statement. This receipt (available in 101 Wesbrook Hall) must be presented when using the Health Service.

Students who cancel their registration before the first week of classes will receive a 100% refund of the health service fee upon surrender of the health service receipt. Students wishing a refund of the health service fee during the first two weeks of classes must present a statement from the health service stating they have not used any of the facilities, in addition to the health service receipt. The health service fee is not refundable after the second week of classes.

Students interested in enrolling in the Health Service Plan should do so at the time of registration and may not enroll in the plan after the second week of the term.

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

## library

The library resources of the University of Minnesota are housed in 35 separate units located on the Minneapolis and St. Paul campuses. The library units which are generally open in the evening and on weekends are the St. Paul Campus Library, Walter Library (East Bank) and Wilson Library (West Bank). If you have questions about library resources, hours, services, etc., call GENERAL LIBRARY INFORMATION (373-2424).

Continuing Education and Extension students are entitled to use University library facilities and to borrow books from the University of Minnesota libraries. Extension students are subject to all library regulations, including those covering loan periods, fines on overdue books, and recalls of books needed by other patrons or for course reserves. **Presentation of a current fee statement is required when borrowing books.**

## locker rental service

The rental rate is 60 cents for a half locker or \$1 for a full locker a term. Padlocks are provided (without charge) while the locker is in use. Locker rental offices for East Bank campus locations are located in B-78 Coffman Memorial Union (**Lost and Found Desk**); 110 Anderson Hall (for West Bank lockers); and 212 McNeal Hall (for St. Paul lockers). Further information available at B-78 Coffman (376-3003).

## lounges and study areas

There are many lounges, libraries, and classrooms open during the evening to Extension students who want to study, relax, or talk with classmates and friends. To receive information on all of the East and West Bank and St. Paul campus lounge and study areas, call 373-3195.

## parking facilities

Ample parking is available for Extension students. (See maps in the back of this **Bulletin**.) Call 376-7500 to request a parking and campus map.

**Parking for handicapped students**—Handicapped students can purchase quarterly or daily parking permits for parking in several on-campus locations, enabling them to move from class to class by car. For information on costs and parking locations, call 373-4190.

## phones

Campus-only phones (free of charge) are located at several convenient indoor and outdoor locations on the Minneapolis and St. Paul campuses. They can be used around the clock for communication with University Police and the emergency operator. Calls can be made to University Information from 7:30 a.m. to 6:30 p.m. After 6:30, the phone number of a staff member who is on call will be given. Campus phones **cannot** be used for placing off-campus calls. For a map showing phone locations, call 373-1234. A phone is located in the lobby of Westbrook Hall.

## police assistance

University Police provides assistance to Extension students—whether the problem is a locked car or closed University garage. Free ambulance service is provided to all students and staff while they are on campus. Students should make note of the University Police number, **373-3550**.

## publications

### Info

**Info**, a newsletter for University Extension students, is published monthly (except June and July). It contains information important to Extension students, faculty, and persons interested in learning more about University Extension Classes. Issues include articles on new courses, activities and facilities open to Extension students, registration information, faculty, and timely University policy decisions which affect Extension students.

**Info** is mailed automatically to all Extension students who have registered for classes within the past two years. To place someone's name on the mailing list, call 376-7500.

### Student-Staff Directory

A University student-staff directory is available at 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 by mail subscription. The **Daily** covers campus and community activities and has a books section on Mondays and an arts and entertainment section on Fridays. Subscription rates are \$6 a quarter (50 issues), and \$18 a year (180 issues). **Minnesota Daily**, 10 Murphy Hall, University of Minnesota, Minneapolis, MN 55455 (373-3385).

### Connect

**Connect**, a handbook on student organizations and activities (printed by the Student Activities Center and orientation Office) may be picked up 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 Wesbrook hall or call (373-3195).

## Field Experience Information

Field experience learning opportunities are available to University students in several areas. The Office for Special Learning Opportunities (OSLO) maintains a file on an enormous range of resources available to those who wish to earn a portion of their academic credits through community-based learning experiences. The file is designed for student use. Advisers are available to provide supplementary information. Over 200 programs and many special placements are included. For more information, call 373-7550, or visit the OSLO office, 201a Wesbrook Hall.

## Calendar

A Twin Cities campus **Calendar** is available to all Extension students. The quarterly calendar lists University concerts, athletic events, theatre offerings, U.S. Film Society, lectures, art exhibits, music performances, and other cultural activities. University Relations (373-2126).

## theatre, artists course, and special lectures

Educational and cultural events are continually offered on the University campuses. Many are open to the student body and to the public without charge. University Theatre Ticket Office (373-2337); Department of Concerts and Lectures (373-2345).

Also check the local newspapers' **entertainment sections** for events.

## bus transportation between campuses

Bus transportation between the Minneapolis and St. Paul campuses is available Monday through Friday on special buses labeled "Intercampus" and numbered 13. The Minneapolis campus terminal is at the Pillsbury Hall (corner of Pillsbury 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 from 7:45 a.m. and at 20-minute intervals from 9:25 to 10:45 p.m. because after 10:45 p.m. follows:

Leave Jones Hall: 7:45 p.m., 8:25, 9:05, 9:45, 10:25, 10:45

Leave St. Paul Student Center: 9:05 p.m., 9:45, 10:25, 10:45

There is no charge for riding the bus unless one enters or exits a bus stop located off campus (see **Student Directory** for route map and bus stops).

Buses stop at 29th and Como Center and Eckles, and at Fitch and Gortner for students using parking lots near these locations. Parking is free at the 29th and Como lot, although there is a charge for parking at the other locations. Information can be obtained at the Bursar's Office. Buses do not stop at the West Bank bus terminal.

The West Bank bus runs Monday through Friday from 9:15 to 10:45 p.m. The West Bank terminal is in front of Blegen Hall. The Minneapolis West Bank bus terminal is on the N.W. corner of Pillsbury Drive and 15th Avenue (one block west from Eddy Hall). Bus schedules and further information are available at the student unions; or telephone 373-0374, room 216, Printing and Graphic Arts Building, 2818 Como Ave. S.E.

## 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, with Extension students entitled to elect eight senators and eight alternates. Extension Classes students are elected to the University Senate automatically to 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 3 credits in the University of Minnesota credits in the last 5 years. At the time of election, 3 credits in Extension Classes (semesters) and 3 credits in other registrations count equally). Students wishing to become candidates may register for candidacy at 180 Wesbrook Hall, Minneapolis campus, or call 376-7500 to have filing forms mailed.

### Dates for filing are February 7 through March 7

Upon application for candidacy, the candidate must provide proof of their eligibility: transcripts indicating they are in good standing and meet the credits-earned requirement, and a fee statement showing no debt load. Once certified as a candidate, the student is free to campaign in any 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 sketch of each candidate's qualifications.

The eight candidates receiving the greatest number of votes will be elected senators. Alternates will be the group of eight candidates receiving the next highest number of votes.

Election of Extension Classes senators and alternates will be held April 11-17. Please read the following carefully:

**Eligibility for voting**—To be eligible to vote in the election, a student must be registered in Extension Classes and present a current fee statement when voting.

**Polling places**—Students may vote by mail or via ballot information distributed in the classroom.

Students voting by mail must send paid fee statement with ballot. Fee statement will be returned by mail immediately. For ballot or information call 376-7500.

## student board (extension classes)

The Extension Classes Student Board was formed to serve Extension students, faculty, and the administration in the exchange of ideas and information pertaining to the Department of Extension Classes.

It is composed of the student senators and alternates elected to the University Senate, appointed Extension students, the dean of Continuing Education and Extension (or a representative) and an Extension Classes faculty member. Any Extension student is eligible to be appointed to the Student Board. Eligibility is registration in any Extension class. There is no credit requirement.

All students are urged to communicate their ideas, suggestions, and concerns to their Student Board. Students interested in joining the Student Board, or in talking with members about a particular concern, should call 376-7500.

# degrees and certificates

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**For further information  
about degrees and certificates,  
telephone Extension Counseling:  
373-3905**

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# degrees

## undergraduate degrees

### **associate in arts (A.A.), General College**

The General College of the University offers a two-year program of liberal and general studies leading to the Associate in Arts degree. The academic requirements for the A.A. degree are: (1) 90 passing credits and (2) passing the General College Degree Comprehensive Examination.

Of the 90 credits required for the degree, 45 must be taken in University of Minnesota courses; 30 of these 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.), General College bachelor of general studies (B.G.S.), General College**

Students admitted to baccalaureate 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 an advisor. 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. After the first 90 credits (A.A.), 45 credits in both baccalaureate degree programs must be taken in General College courses.

It is anticipated that most, if not all, of the credits required for both of these baccalaureate degrees in the General College can be completed through Extension. Persons holding A.A. degrees or nearing completion of A.A. degrees may learn more about General College baccalaureate programs by making an appointment with a General College counselor, 10 Nicholson Hall, 373-4400; or an Extension Counselor, 314 Nolte Center, 373-3905.

## **general college occupational options**

(For more information on the following programs call the Counseling Department, 373-3905)

Occupational programs in the General College provide for a variety of arrangements toward their completion. In a few of them acceptance by a supervisor or advisory committee is necessary before the occupational specialty courses may be taken. In some, the specialty courses are available only in day classes but much of the general education course work is available in Extension Classes. Some of the 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:** The General College and the University of Minnesota School of Dentistry jointly sponsor a program leading to certification in dental assisting. Credits earned in the 10-month technical sequence may be applied toward the A.A. degree. Students planning to work toward a degree are urged to attend General College classes the first year and spend the second year in the dental assistant program

**HUMAN SERVICES GENERALIST TRAINING:** A two-year program leading to the A.A. degree is jointly sponsored by the General College and the Department of Psychiatry of the University of Minnesota Medical School. The program is designed to help paraprofessionals already employed in a mental health setting to increase their knowledge, skills and abilities. Supervised on-the-job experience provides students with opportunities to relate classwork to employment situations.

**LEGAL PARAPROFESSIONAL EDUCATION:** Two sequences are offered for students interested in working in legal offices or agencies. The Legal Assistant sequence requires 90 quarter credits of course work. The Legal Administrator is a four-year (180-credit) curriculum leading to the B.A.S. degree. At all levels the program includes basic legal courses and classes aimed at essential business and communication skills. The Legal Assistant and Legal Administrator programs include legal specialty courses and internships in law offices or legal agencies.

**RADIOLOGIC TRAINING:** A program jointly sponsored by the General College and the University of Minnesota Hospitals School of Radiologic Technology, leads to certification and registration in Radiologic Technology and to the A.A. degree. The 27-month program includes 45 credits in technical training and 45 credits in general education. Candidates for the B.A.S. may be granted additional credits for their technical training.

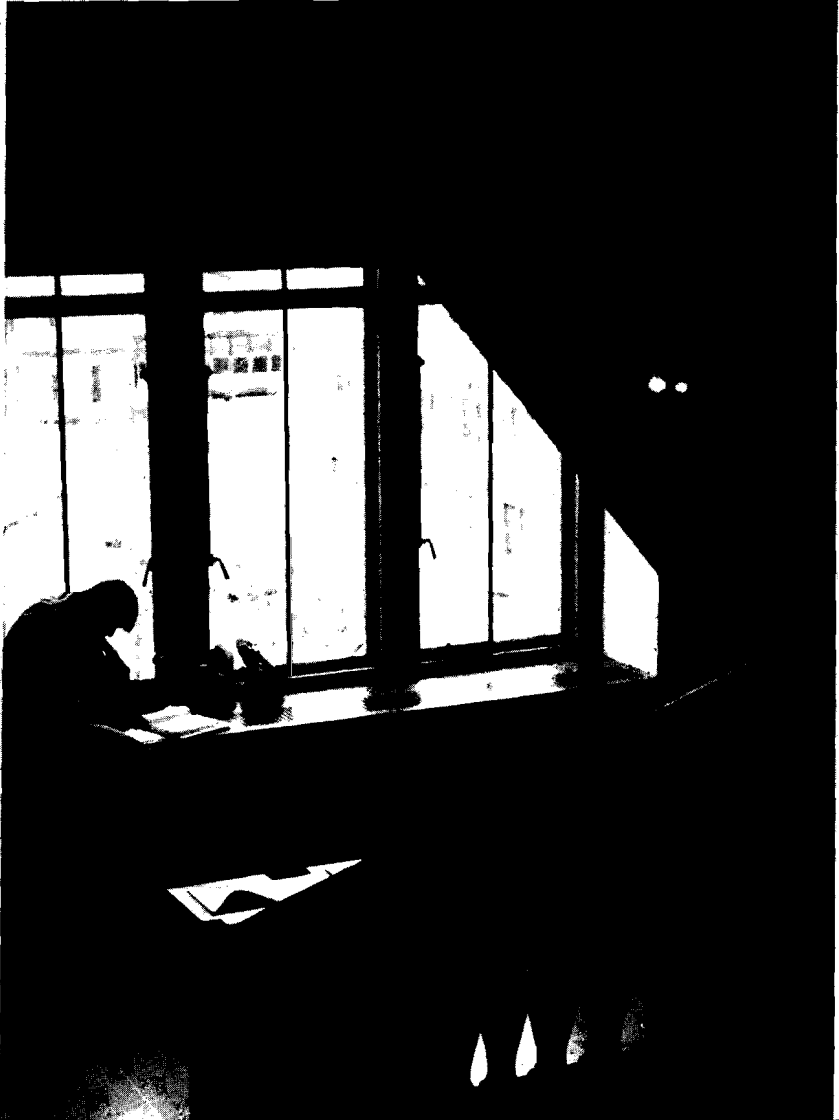
**MARKETING:** The marketing sequence combines general education courses, technical/professional skills courses, and a directed internship in a Twin Cities business establishment.

**RECREATION FOR SPECIAL GROUPS:** A program jointly sponsored by the General College and the School of Physical Education and Recreation is designed to prepare students to direct the recreation activities of special populations in health care facilities and community centers. The course of study includes field work, general education and courses in recreation theory and skills.

**VOCATIONAL TEACHER EDUCATION:** A program sponsored by the General College and the College of Education prepares qualified trade, technical and business persons for entry into vocational-technical training positions, and provides an opportunity for current vocational-technical teachers to further their

general education. Credit toward either an A.A. or a baccalaureate degree may be granted for previous technical, trade or business training from accredited schools and for related work experience.

**VOCATIONAL-TECHNICAL COOPERATIVE PROGRAMS:** In order to provide a wide range of opportunities in occupational programs, the General College grants blanket credit toward its degree programs for courses of study completed at all Minnesota public and some private vocational technical schools. The purpose of these arrangements is to combine college courses in general education with specific vocational preparatory programs.



## **associate in liberal arts (A.L.A.), College of Liberal Arts**

The Associate in Liberal Arts degree, administered by the College of Liberal Arts, is awarded to students who complete 90-credit programs devoted largely to general education. Students who wish to transfer to professional or other education find the degree useful as evidence of achievement in the liberal arts. It is equivalent to about half of the bachelor's degree program. 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 acceptable to CLA, 45 of them on A-N grading.
2. At least 45 University of Minnesota credits.
3. Satisfaction of CLA English composition requirement.
4. Satisfaction of four of the following: (a) Foreign language study through the college 3rd-quarter level, or exemption based on 3 or more years of high school work (one language only), or exemption by examination; (b) 8 to 10 credits in Group A of the B.A. Group Distribution requirements (see page 360); (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.), College of Liberal Arts**

The Bachelor of Arts degree may be earned from the College of Liberal Arts in 19 major fields through Continuing Education and Extension. Part of the degree program may also be met with credits transferred from other accredited colleges and universities. 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/she has made a 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 (45 awarded in CLA courses). He/she must also satisfy the English composition, foreign language, and Group Distribution requirements. These are defined in statements of graduation requirements, page 359. Finally, a B.A. candidate must complete a major sequence in the field of his/her choice and complete at least 30 credits in 3000 or 5000 level courses from areas outside his/her major.

Most students try to meet on the English composition, foreign language, and Group Distribution requirements in their first two years, leaving the last two years free for work in their major field and electives. Though it is usually desirable to meet these requirements as early as possible, it is not necessary to complete them before applying for admission to a major program. Sophomores in good standing may apply for admission to majors.



The majors that may be completed entirely in Extension Classes are:

American Studies	History
Anthropology	Humanities
Architecture	Interdepartmental
Art History	Journalism (advertising sequence)
Arts, Studio	Philosophy
Child Psychology	Political Science
Classical Civilizations	Psychology
Economics	Social Welfare
English	Sociology
Geography	

Majors in three other departments—Computer Science (the B.S. degree is available in the Institute of Technology), Mathematics, Speech-Communication—may be nearly completed through Extension classes. A few courses must be taken in day classes (the department concerned sometimes permits substitution).

Condensed descriptions of major requirements for these degrees are given with course listings under department headings in this **Bulletin**; a copy of the 1978-1978 **CLA Bulletin** is essential to the CLA degree candidate. It may be obtained by calling the Bulletin Bureau, 373-2153. Degree requirements are described in its Section I. In addition, a copy of the "Procedures for Obtaining the Bachelor of Arts Degree Through Extension" should be obtained from Extension Classes, 101 Westbrook Hall, or the Counseling office, 314 Nolte Center.

### changes in graduation plans

CEE B.A. candidates usually follow the graduation requirements in use at the time of their admission to CLA (requirements have been altered several times in recent years). Those entering degree programs in or after Fall 1972 must meet the requirements described above, which differ from 1970 requirements principally in specifying A, B, C, or S grade records instead of C averages. Details of other requirements of 1970 and 1972 plans are shown here. A student may usually follow a plan more recent than that under which he became a degree candidate, but the reverse is not permitted. (Students admitted to CLA and registered in classes before Summer Session 1967 follow 1957 requirements unless they choose a later plan, as do those with 39 previously earned credits who were thus admitted and registered before Summer Session 1969. The 1967 requirements apply to those admitted and registered between Summer Session 1967 and Summer Session 1970.)

### english, language and distribution requirements

**English Composition 1001-1002 or Communication 1001-1002 or equivalent or exemption**

### Foreign Language—Route I or Route II

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

#### High school study

4 years  
3 years  
2 years  
1 year

#### Additional study in college

at least 3 cr at higher level in same language  
at least 8 cr at higher level in same language  
at least 13 cr at higher level in same language  
at least 18 cr at higher level in same language

Students with two or more years of Latin in high school may satisfy this requirement by continuing in Latin on the above schedule to the 23 credit minimum or by taking 15 credits in another language; high school study in the other language may also count, in accordance with the schedule in II A below.

**Route II.** Complete a minimum of 27 credits in the following combination:

A. At least 15 credits in a single foreign language. Background from high school usually relates to this requirement as follows:

<b>High school study</b>	<b>Additional study in college</b>
3 years	none in college
2 years	5 credits at higher level in same language
1 year	10 credits at higher level in same language

B. At least 12 credits (7 for those with 4 years high school study in one language) in courses concerned with the country or countries that use the language in which the student completes 15 credits. (Further study in the language beyond the 15-credit level counts as part of the 12-credit requirement.) A list of eligible courses is available in CLA offices and in the Counseling Department, 314 Nolte Center. Courses elected for this purpose may not be used to satisfy the group distribution requirements.

### **group distribution requirements**

At least 48 credits in four groups, distributed as follows:

- Group A—Communication, Language, Symbolic Systems  
8-10 credits (normally 2 courses)
- Group B—Physical and Biological Sciences  
12-15 credits (normally 3 courses, one with laboratory)
- Group C—Man and Society  
16-20 credits (normally 4 courses)
- Group D—Artistic Expression  
12-15 credits (normally 3 courses)

Special notes on Group Distribution Requirements.

1. A maximum of 12 credits from any one department may be used to meet their requirements, even though courses from some departments may be used in more than one group. No course may be used in two groups.
2. Courses used for English composition and for language requirements (including courses used for Route II, part B) may not be used for Group Distribution requirements.
3. The College will offer opportunities to meet Distribution requirements by examination. (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.), College of Liberal Arts**

The Bachelor of Science degree is offered by the Departments of Communication Disorders, Economics, the School of Social Work, and the Urban Studies program. Its requirements are substantially those of the B.A. program except that the foreign language requirement is not included and the major concentration may be more extensive.

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

## **bachelor of elected studies (B.E.S.), College of Liberal Arts**

The experimental Bachelor of Elected Studies degree is now undergoing review and is not opened for new registrations. The program may become available again within the year 1976-77.

For information about the program, call the Bachelor of Elected Studies office, 376-7467 or the Counseling Office, 373-3905.

## **college of liberal arts honors program**

The College of Liberal Arts (CLA) Honors Program, which provides special educational opportunities to highly motivated and academically accomplished students, is open to Extension students. Many of the program's opportunities are available in the late afternoons or evenings; many involve independent research or tutorial projects.

Honors activities—including honors courses and colloquia (small discussion groups for freshmen and sophomores focused on selected topics)—are open to all students, whether or not the students are enrolled in CLA or in the program. Other 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 eligible to graduate with one of the traditional Honors designations, **cum laude**, **magna cum laude**, **summa cum laude**.

Interested Extension students should call the Honors Division Office (373-5116), and arrange to talk with a staff member. A special honors curriculum can be developed for each Extension student, depending on his availability to participate.

Mainly, the Honors Program's purpose is to provide special educational opportunities to students who want and need them; certification for graduation with honors is a secondary function. Thus, admission standards to the program are designed to identify those who are genuinely interested in the offerings, rather than only those whose claim is based on above average grades.

## **bachelor of science in business (B.S.B.), College of Business Administration**

The Bachelor of Science in Business degree from the College of Business Administration may be earned through Continuing Education and Extension. 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 in Business courses 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 (373-3701) or the Counseling Office (373-3905).

**NOTE**—Acct 1050-1051; Econ 1001, 1002; Math 1131 or 1111 or 1201, 1142; Psy 1001; Soc 1001; QA 1050, the core requirement for the B.S.B.; and the 20 credits of C.B.A. elective courses cannot be taken on S-N grading.

Students are referred to the **College of Business Administration Bulletin** for full information on prebusiness requirements and B.S.B. requirements. The bulletin may be obtained by calling 373-2153.

A copy of "Procedures for Obtaining the Bachelor of Science in Business Degree Through Extension" should be obtained from Extension Classes, 101 Wesbrook Hall, or the Counseling Department, 314 Nolte Center.

## **pre-business requirements**

### **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 1131 or 1111 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 1131 or 1111 or 1201. High school trigonometry or Math 1008 is a prerequisite 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 (4 with laboratory)

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

Ast 1008, 1009 or 1011, 1021

BioC 1301, 1302†

Biol 1011†, 1101, 1102, 1103†, 1104, 1105, 1106†, 3051, 1107

Bot 1009, 1012, 3071

Chem 1004-1005†

EBB 3001

GC 1111†, 1112, 1113, 1131†, 1132, 1137, 1161, 1162, 1163, 1166, 1171†, 1172, 1177†, 1181

GCB 3002

Geol 1001†, 1002†, 1008, 1011†, 1012, 1013

I of T 3101, 3201, 3301, 3401, 5311

NSci 1004†, 1005, 1006†, 3011†, 3101, 3201, 3301, 3401

Phys 1014, 1024, 1015†, 1025†, 1031†, 1032†, 1041†, 1042†, 1051†, 1052†, 1061†, 1271-1281-1291, 1275-1285-1295†, 3801†, 5091

### **III. Man and Society**—16-17 credits (all four courses are required)

Econ 1001, 1002

Psy 1001 or GC 1281

Soc 1001 or GC 1211 or 1212

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†Indicates with laboratory

#### **IV. Artistic Expression—8 credits**

Afro-American Studies (all courses)  
American Indian Studies (all courses)  
Chicano 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  
GC 1311, 1312, 1313, 1331, 1333, 1338, 1361, 1362, 1365, 1367, 1371, 1372, 1373, 1374,  
1381, 1384, 1391, 1471, 1472, 1481, 1483, 1485, 1486, 1536, 1811, 1812, 1815, 1816  
English Literature (all courses)  
Foreign Literature  
Humanities (all courses)  
Music (all courses)  
Spch 1101, 1102, 1103, 1104, 1105, 3201, 3202, 3203, 3204, 5201  
Theatre (all courses)

#### **V. Business Courses—12 credits**

Acct 1050-1051  
QA 1050 (or) GC 1454

**VI. Students planning to enter the BSB Accounting Program** are required to complete Comp 1027.

**VII. Electives** to complete at least 80 credits required for admission.

**VIII. Overall GPA** of 2.50 (C +) required for admission to regular program; 2.70 (C +) for accounting program.

### **Requirements for Graduation**

#### **UPPER DIVISION REQUIREMENTS**

For graduation from the College of Business Administration, a student is required to:

1. Complete a minimum of 180 quarter credits of which a minimum of 45 credits must be taken at the University of Minnesota (of which a minimum of 40 credits in Business courses must be taken after admission to the College of Business Administration). The 45 credits which must be taken at the University of Minnesota are in residence and are normally the last 45 credits in the degree program.
2. Have a minimum grade **average** of C (2.00): (a) overall, (b) on all work taken after admission to the College of Business Administration, and (c) on all Upper Division business administration courses.
3. Complete Upper Division course requirements for the appropriate degree program as listed below. Prebusiness course requirements as listed above must also be completed and cannot be used to satisfy the Upper Division requirements listed below.

#### **REQUIRED UPPER DIVISION COURSES**

(For students entering the College of Business Administration Fall Quarter 1976 or thereafter.)

### **Bachelor of Science in Business—Regular Program**

- 1A. 24 credits of fixed core group courses:
  - Mgmt 3001—Fundamentals of Management
  - BFin 3000—Finance Fundamentals
  - Mktg 3000—Principles of Marketing
  - BGS 3002—Business and Society
  - Econ 3101—Microeconomic Theory
  - QA 3055—Introduction to Management Sciences
- 1B. Elective Core (16-17 credits). Any four courses from the following: (no more than one course from any one department will be allowed for this requirement)
  - OAM 3000—Introduction to Operations Management
  - Trans 3054—Fundamentals of Transportation
  - IR 3002—Industrial Relations Systems: Labor Markets and the Management of Human Resources
  - Mgmt 3004—Business Policy: Strategy Formulation and Implementation
  - Ins 3100—Risk Management and Insurance
  - BLaw 3058—Introduction to Law, and the Law of Contracts and Agency
  - MIS 5100—Introduction to Computers and Computer Data Processing, or
  - MIS 5101—Introduction to Management Information Systems
2. 20 credits of business administration electives. These must be at the Upper Division level (numbered 3000 and above) and must be in at least two different subject areas in the College of Business Administration.
3. 8 credits of course work numbered 3000 and above in one of the following departments: economics, mathematics, psychology, or sociology.
4. 8 credits of course work numbered 3000 and above in any department of the University outside of the College of Business Administration. These need not be all in one area.
5. Additional electives (Upper Division or Lower Division) to complete the 180 quarter-credit requirement for graduation.

### **Bachelor of Science in Business—Accounting Program**

- 1A. 24 credits of fixed core group courses:
  - Mgmt 3001—Fundamentals of Management
  - BFin 3000—Finance Fundamentals
  - Mktg 3000—Principles of Marketing
  - BGS 3002—Business and Society
  - Econ 3101—Microeconomic Theory
  - QA 3055—Introduction to Management Sciences
- 1B. 12-13 credits (three courses) from the following:
  - OAM 3000—Introduction to Operations Management
  - Tran 3054—Fundamentals of Transportation
  - IR 3002—Industrial Relations Systems: Labor Markets and the Management of Human Resources
  - Mgmt 3004—Business Policy: Strategy Formulation and Implementation
  - Ins 3100—Risk Management and Insurance
  - BLaw 3058—Introduction to Law, and the Law of Contracts and Agency
2. 16 credits of specified accounting courses:
  - Acct 3105-3106-3107—Intermediate Accounting
  - Acct 3220-3221—Cost Accounting
  - Acct 5125—Auditing Principles and Procedures
3. 8 credits (two courses) of accounting elective courses (Acct 3199 and 3299 may not be used to satisfy this requirement).
4. 5 credits in management information systems courses:
  - MIS 3099—Programming Computers Using Fortran
  - MIS 5100—Computers and Systems Design
5. 8 credits of course work numbered 3000 and above in one of the following departments: economics, mathematics, psychology, or sociology.
6. 8 credits of course work numbered 3000 and above outside of accounting. May be either inside or outside College of Business Administration.
7. Additional electives (Upper Division or Lower Division) to complete the 180 quarter-credit requirement for graduation.

## **institute of technology (B.S.)**

Through registration in Extension Classes students may earn a Bachelor's degree in Computer Science and all but approximately 20 credits towards a Bachelor's degree in Civil Engineering, Electrical Engineering and Mechanical Engineering. The degree may then be completed after a limited amount of day school attendance or through University-Industry Television for Education (UNITE). Students seeking to complete degrees in the above fields primarily through evening study should contact an adviser in the appropriate department at an early date and should apply for admission to the Institute of Technology after the completion of approximately 39 to 45 credits. For specific degree requirements please consult the **Institute of Technology Bulletin** (for CSci see page 105 of this Bulletin).

**Honors**—Students with the appropriate grade point average may graduate with "distinction" or "high distinction." For more information, call the Institute of Technology (373-3227) or the Counseling Office (373-3905).

**The following are tentative schedules** designed to assist students in Civil Engineering, Computer Science, Electrical Engineering and Mechanical Engineering in planning a program of studies leading toward the completion of a certificate or degree program. Every effort will be made to adhere to the schedules on pages 365-368, but they are subject to change owing to unforeseen circumstances. Courses in addition to those listed may also be offered.

### ***electrical engineering***

(See course offerings section)

### ***civil engineering***

(see Institute of Technology Bulletin for full course descriptions)

The following courses will be available on a rotating basis over a four-year cycle:

- 3100 Introduction to Surveying and Mapping
- 3200 Introduction to Transportation Engineering
- 3300 Elements of Soil Mechanics
- 3400 Fluid Mechanics
- 3500 Introduction to Environmental Engineering Problems and Analysis
- 3700 Introduction to Construction Materials
- 5002 Engineering Economics
- 5100 Land Surveying
- 5102 Site and Route Engineering
- 5103 Land Planning and Subdivision Design
- 5200 Geometric Design of Highways
- 5201 Highway Traffic Characteristics & Operations
- 5210 Introduction to Transportation Planning
- 5310 Design of Foundations
- 5312 Design of Slopes and Embankments
- 5320 Geomechanics I
- 5321 Geomechanics II
- 5401 Water Resources Engineering
- 5405 Hydrology & Hydrologic Design
- 5410 Open Channel Hydraulics
- 5420 Introduction to Water Resources Management
- 5500 Analysis and Design of Water Supply Systems
- 5501 Analysis and Design of Waste Water Systems
- 5505 Water Quality and Treatment
- 5600 Linear Structural Systems
- 5610 Design of Metal Structures
- 5611 Design of Reinforced Concrete Structures
- 5701 Cemented Materials
- 5702 Manufacture and Quality Control of Construction Materials

## **computer science (CSci)**

(see Institute of Technology Bulletin for full course descriptions)

### **To be offered 1977-78:**

CSci 1100 Introduction to Fortran Programming I 2 credits  
CSci 1101 Introduction to Fortran Programming II 2 credits  
CSci 3001 Perspectives on Computers and Society 4 credits  
CSci 3101 A Fortran Introduction to Computer Programming 4 credits  
CSci 3105 Fundamentals of Algorithms and Languages I 4 credits  
CSci 3107 Introduction to Assembly Language Programming 4 credits  
CSci 5101 Structure and Programming of Software Systems I 4 credits  
CSci 5102 Structure and Programming of Software Systems II 4 credits  
CSci 5104 System Simulation: Languages and Techniques 4 credits  
CSci 5121 Introduction to Data Structures 4 credits  
CSci 5201 Computer Engineering 4 credits  
CSci 5301 Numerical Analysis 4 credits  
CSci 5302 Numerical Analysis 4 credits  
CSci 5400 Introduction to Automata Theory 4 credits  
CSci 5501 Artificial Intelligence and Heuristic Programming 4 credits

### **To be offered 1978-79:**

CSci 1100 Introduction to Fortran Programming I 2 credits  
CSci 1101 Introduction to Fortran Programming II 2 credits  
CSci 3001 Perspectives on Computers and Society 4 credits  
CSci 3101 A Fortran Introduction to Computer Programming 4 credits  
CSci 3105 Fundamentals of Algorithms and Languages I 4 credits  
CSci 3106 Fundamentals of Algorithms and Languages II 4 credits  
CSci 3107 Introduction to Assembly Language Programming 4 credits  
CSci 5101 Structure and Programming of Software Systems I 4 credits  
CSci 5102 Structure and Programming of Software Systems II 4 credits  
CSci 5103 Introduction to Assemblers 4 credits  
CSci 5122 Advanced Data Structures 4 credits  
CSci 5502 Introduction to Operating Systems 4 credits  
CSci 5503 Introduction to Compiler Construction 4 credits

### **To be offered 1979-80:**

CSci 1100 Introduction to Fortran Programming I 2 credits  
CSci 1101 Introduction to Fortran Programming II 2 credits  
CSci 3101 A Fortran Introduction to Computer Programming 4 credits  
CSci 3104 Introduction to Programming and Problem Solving 4 credits  
CSci 3105 Fundamentals of Algorithms and Languages I 4 credits  
CSci 3106 Fundamentals of Algorithms and Languages II 4 credits  
CSci 5101 Structure and Programming of Software Systems I 4 credits  
CSci 5102 Structure and Programming of Software Systems II 4 credits  
CSci 5121 Introduction to Data Structures 4 credits  
CSci 5201 Fundamentals of Logic System Design 4 credits  
CSci 5301 Numerical Analysis 4 credits  
CSci 5302 Numerical Analysis 4 credits  
CSci 5400 Introduction to Automata Theory 4 credits  
CSci 5503 Introduction to Compiler Construction 4 credits  
CSci 5504 Formal Methods in Compiler Construction 4 credits



# ELECTRICAL ENGINEERING

SEQUENCES LAST TAKEN			1975-1976			1976-1977			1977-1978			1978-1979
F	W	S	F	W	S	F	W	S	F	W	S	
3010	3011	3012	3050 3400	3051 3401	5050 3402	3100	3101	5100	4th Yr. E.E. Course if offered			→
3050 3400	3051 3401	5050 3402	3100	3101	5100	5051	5055	5352	Day School and/or UNITE			→
3100	3101	5100	5051	5055	5352	Day School and/or UNITE						→
5055	5051	5053	Day School and/or UNITE									→
•	•	1510	3010	3011	3012	3050 3400	3051 3401	5050 3402	3100	3101	5100	→
•	•	1510	3010	3011	3012	3050 3400	3051 3401	5050 3402	3050 3400	3051 3401	5050 3402	→
		(Spr. Sem) 1510	3010	3011	3012				3010	3011	3012	→
		(Spr. Sem) 1510							(Spr. Sem) 1510			→

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\* Could take: Math 3211 or 3221 or 3231; Math 3091 or 3092; Phys 1291/1295; M.E. 3301-3303; AEM 3036, ENGL 3085; Etc.

## **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 1975-76 academic year. They do not include all requirements for the Bachelor's degree in Mechanical Engineering.

<b>Year</b>	<b>Course Numbers</b>	<b>Quarter (F W S)</b>	<b>Semester (F S)</b>	<b>Total Hours</b>
1	Math 1211, 1212, 1231 Chem 1004, 1005	5 5 5	5 5	25
2	Phys 1271 (1275), 1281 (1285) Math 3221 CSci 3101 Comp 1001 or Comm 1001	5 4 4	5 5	23
3	Phys 1291, 1295 AEM 3036, 3016 EG 1025 EE 1510 Comp 1002 or Comm 1002	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, IEOR 5000 ME 3701, 3702 *Liberal Education	2 2	4 4 4 4	20

\*Additional Liberal Education may be taken by Extension or Correspondence to complete 36 total credits required.

## University College (B.A., B.S.)

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, most of University College's specific programs are, therefore, experimental and 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 four degree-granting programs: the Inter-College Program, the Experimental College, the University Without Walls, and University Scholars Program. Extension students interested in working toward a degree through one of these programs should contact the Extension Counseling Department, 314 Nolte Center (373-3905) or the individual programs for additional information.

**The Inter-College Program (ICP)** is a traditional course (credit) based program but has no fixed curriculum and draws from the entire University for its courses. An applicant for admission arranges a study program which fits his/her individual needs. Each program has a major concentration area or areas which contain a minimum of 60 upper division credits from two or more colleges. An applicant must have 80-90 credits, at least 15 of which have been taken at the University of Minnesota, before (s)he is eligible for admission. Students accepted in the Program may work toward either a B.A. or B.S. degree. Further information is available at 105 Walter Library, University of Minnesota, Minneapolis, Mn. 55455 (373-4638).

**The Experimental College (EC)** 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/her 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 interdepending-learning atmosphere in the college. Further information is available at 1507 University Ave. S.E. (Dome City), Minneapolis, Mn. 55455 (373-9782).

**The University Without Walls (UWW)** 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 is available at 201 Westbrook Hall, University of Minnesota, Minneapolis, Mn. 55455 (373-3919).

**University Scholars Program.** University College has introduced a new baccalaureate degree program designated the University Scholars Program. It allows a student and faculty member to design a degree program based on individually tailored learning experiences which may include travel, internships, independent reading and research as well as traditional classroom instruction. The program is directed toward students whose needs are not met by the University's current degree offerings. It is open to any University of Minnesota student who has completed two years of college. **Students must be nominated for the program by a faculty member** who agrees to serve as the student's adviser in the program,

supervising and assessing the student's work. Additional information and applications may be obtained from the University College Office, 105 Walter Library, telephone 373-4638.

**The Foreign Studies Program** is a pilot program which encourages students to include overseas study in their undergraduate curriculum. Major components of the program include: language study, cultural-geographic area studies, overseas study (at least one quarter in duration), orientation and reorientation seminars related to the overseas study, and a major concentration. Students may choose courses from any colleges at the University in order to meet these requirements. The major concentration can be an individually-designed major in University College or an existing major in another college at the University. Further information is available at 105 Walter Library, University of Minnesota, Minneapolis, Mn. (373-5378)

**Other Options.** UC sponsors a variety of pilot experimental programs and cross-college coursework. A Degree by Examination Only pilot program is currently in the planning stages. Further information on any of these programs may be obtained from the University College Office, 105 Walter Library (373-4638).

# graduate degrees

## master of arts (M.A.) in english

The Department of English, in cooperation with the Graduate School, offers a Master of Arts through Continuing Education and Extension. This program is designed to provide an opportunity for extending a student's knowledge of British and American literature and the English language.

### **requirements for the master of arts degree in english (plan B)**

**COURSEWORK: (44 credits):** No fewer than seven courses in British and American literature and the English language; 8 credits in one or more "Related Fields;" one quarter of seminar work. For further details, consult the English Department section of the current **Graduate School Bulletin**.

**EXAMINATION:** A written examination for the M.A. is given in the fall and spring quarters and during the first term of Summer Session. It will emphasize close analysis and explication. For further details, consult the Director of Graduate Study in the Department of English.

**LANGUAGE:** A reading knowledge of one 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 Johnson 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, 205 Lind Hall, by Aug. 27, 1976 for fall quarter, 1976, and by Dec. 3, 1976 for winter quarter, 1977. (Students wishing to apply for fall, 1977, candidacy may take the Graduate Record Examination on the University of Minnesota, Minneapolis Campus, in December 1976, January, February, April or June 1977.)

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 45).

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 this year's course offerings section for speech-communication classes. Students may register in these courses either through Extension or through the Graduate School. **(But see note 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 comprehensive 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 309 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 (373-2568), or contact the CEE Counseling Office at 314 Nolte Center.(373-3905). A brochure is available from the Department of Speech-Communication, 317 Folwell Hall.

# certificates

Students not certain they can devote the time necessary to earn a college degree are urged to consider seriously a certificate program. These programs are generally regarded by business and industry as valuable professional and technical preparation for employment and promotion in areas requiring extensive knowledge. With careful planning a certificate can be, if the student wishes, a stepping stone to a degree.

Thirty-three certificate programs are conducted by Continuing Education and Extension (CEE). The curricula are described in detail in the following pages. Certificate programs are organized at the collegiate level; students entering them should have adequate educational preparation or other experience to work effectively with college materials. Certificate programs consist of degree credit courses or a combination of degree and certificate credit courses. Certificate credit courses are college level in quality, and represent an accelerated and specialized approach to subject matter in the areas represented. Certificate credit classes are not, however, usually transferable to a degree program.

Work on a certificate may be done in Extension Classes, the Independent Study Department, day school, summer session, or any combination of these. (Certificate programs marked with **(IS)** 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. Certificates are awarded by CEE (not by individual University of Minnesota colleges). All certificates are dated and awarded as of each quarter of the academic year. Students receiving senior certificates may participate in the June commencement exercises.

## continuing education and extension honors

All Extension Certificates may now be earned with Honors. A student earning 3.00 to 3.49 grade point average, overall, will be awarded a certificate "with distinc-



tion." 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 and must be taken on the A-N grading system. 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.

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through continuing education and extension

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## **adult psychiatry certificate**

(Training Program for Mental Health Workers)

The Adult Psychiatry Certificate was developed cooperatively by the Department of Continuing Education in Social Work and the Metropolitan Medical Center.

### **training program for mental health workers**

(9 Credits)

This is a highly personalized clinically-oriented program designed to upgrade knowledge relevant to practice for persons employed in the field of mental health. Course content will deal with individual behavior, groups, family and current modes of treatment. The program will extend over three quarters.

Faculty is from the Metropolitan Medical Center along with other professionals from the community. All classes will be held at the Metropolitan Medical Center, 900 South 8th Street, Minneapolis.

The program will be limited to 75 students. Preference will be given to those currently employed in the field of mental health or upon special permission from the program coordinator, Mark Anderson, 347-4216.

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

- Ad Py 0101C Training Course for Mental Health Workers (3 credits)
- Ad Py 0102C Training Course for Mental Health Workers (3 credits)
- Ad Py 0103C Training Course for Mental Health Workers (3 credits)

## **behavior analyst certificate**

(36 to 44 credits)

The Behavior Analyst Certificate program was developed in response to the growing need for persons trained at the post-graduate level in behavior modification and analysis. Designed for persons holding an M.A., B.A., B.S., R.N. or equivalent degree, it involves approximately one year of full-time study, including a practicum, but requires no formal research. Training is geared to the specific type of clients or patients with whom the student wishes to work.

While graduates are not qualified as clinical or counseling psychologists, psychometricians or psychotherapists at the doctoral level, they are trained for positions in the following areas: state or county agencies (such as state hospitals or county welfare agencies); mental health clinics; special schools (such as those for the educable or trainable mentally retarded); private psychiatric or psychological treatment facilities as therapists working with psychiatrists or psychologists; special education classrooms; sheltered workshops; schools for the physically handicapped; day activity centers and private residential facilities for the mentally ill or retarded. The positions graduates might hold, which are usually designated "counselor," "social worker," "psychologist," "occupational therapist," "physical therapist" or "psychiatric nurse" would depend on their prior training, the area of concentration in the course of certificate training, and the specific regulations of their agency.

### **Prerequisites:**

A master's degree, bachelor's degree, R.N. or equivalent from an accredited college.

Preferred majors: psychology, sociology, social work, education, nursing.

Specific courses required: introductory psychology, learning (operant and classical conditioning), individual differences, personality development and abnormal behavior.

Students lacking any of these prerequisite courses may be required to include them in their program work. Students claiming competence in the above areas may be required to pass qualifying examinations.

Grade-point average of 3.0. Factors such as experience, current responsibilities, and date of graduation will also be considered in admitting students to the program.

**Admission procedure:** Applications should be submitted to: **Behavior Analyst Certificate Program, University of Minnesota, Continuing Education and Extension Counseling Department, 314 Nolte Center, Minneapolis 55455. Applications for fall will be accepted July 15 through August 25, 1976.** Preference will be given to people with practical experience dealing with the client population with whom they intend to work. Final review of applications will be made by the Behavior

Analyst Certificate Program Committee. Applicants will be notified by September 15 of their acceptance into the program. Admission to the program is limited.

**Core Requirement: 24 credits**

Two courses, Psy 3960 Topics, and Psy 3970 Directed Studies, which start in fall and continue through winter and spring quarters, for a total of 12 credits each, form the core of the program. **Students who have not started Psy 3960 in the fall may not enter the course in winter or spring quarters, but must wait until the following fall.** Ideally, Psy 3960 and 3970 should be taken concurrently.

Psy 3960 Topics in Psychology: Introduction to Behavior Analysis  
Psy 3970 Directed Studies: Practicum in Behavior Analysis

A student may select one of four areas of concentration—Developmental Disabilities, Emotionally Disturbed Children, Adult Mental Health Management or Chemical Dependency—but individualized programs are also possible. (25% of which must be University of Minnesota credits.) A minimum of 36 to 44 credits will be required for the certificate.

For a more complete description of the program, including a list of courses applicable in each area of concentration, call 373-3905, or write **Behavior Analyst Certificate Program, University of Minnesota, Continuing Education and Extension Counseling Department, 314 Nolte Center, Minneapolis 55455.**

## **commercial art certificate**

(60 credits)

The Commercial Art Certificate was developed by the Department of Studio Arts for students wishing to specialize in the area of commercial art. Students may choose either an illustration or lay-out emphasis.

Students transferring credits to this program from other institutions accredited by the University of Minnesota must take a minimum of 15 credits at the University of Minnesota.

**Core requirements (28-32 credits):**

ArtS 1201 Introduction to Commercial Art  
ArtS 1101 Drawing I  
ArtS 1104 Color  
ArtS 3202 Commercial Drawing I  
ArtS 3203 Commercial Drawing II  
ArtS 3220 Commercial Art Media and Studio Techniques  
Dsgn 3450 Perspective and Presentation Sketches

**Concentration Requirement:**

**A. Illustration Emphasis Requirements (20-28 credits):**

ArtS 3110 Drawing (Life)  
ArtS 3231 Commercial Illustration I  
ArtS 0240C Commercial Illustration II

**B. Lay-out Emphasis Requirements (20-24 credits):**

ArtS 3251 Advertising Design I  
ArtS 3252 Advertising Design II  
ArtS 0260C Advertising Design III

**General Requirements (4-12 credits):**

ArtS 0280C Portfolio and Visual Presentation Techniques

**Electives (8 credits):**

Studio Arts course chosen from 1XXX, 3XXX and 5XXX levels, selected Home Economics and Journalism courses. ArtS 1701 is recommended.

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

## **early childhood studies certificates**

The Early Childhood Studies Certificates were developed in response to the increasing demand for specialized training for child care employees in the area of Early Childhood Studies and are offered by General College through Continuing Education and Extension.

It is possible for a student to move from a course of study for a certificate into a planned program leading to the General College Bachelor of Applied Studies Degree or a Bachelor of General Studies Degree. Anyone who contemplates such long-range objectives should consult an Extension advisor before proceeding further so as to avoid any loss of credits or possible future rejection from the degree program.

For more information on the program and a listing of the quarterly offerings, please write to the Department of Community Programs, 206 Westbrook Hall, University of Minnesota, Minneapolis 55455, or call (612) 376-7401 or Extension Counseling, 373-3905.

### **early childhood studies certificate**

(45 credits)

This certificate, requiring the satisfactory completion of 45 credits of course work, is the equivalent of one academic year of full-time study. All of the credits received in completing the Early Childhood Studies Certificate—45 credits are automatically credited toward the Early Childhood Studies Certificate—90 credits and represents half of its required work load. Students transferring credits to this program from other institutions accredited by the University of Minnesota must take a minimum of 12 credits at the University of Minnesota.

**Group I—General Education (30 Credits)**

**Group II—Career-Related (12 Credits)**

**Group III—Supervised Practicum or Field Work (3 Credits)**

### **early childhood studies certificate**

(90 credits)

The Early Childhood Studies Certificate—90 credits is a continuation of the Early Childhood Studies Certificate—45 credits, expanding the General Education, 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 (IS)**

(46 credits)

The Fire Protection Certificate program was planned by the Fire Information Research and Education Center, Agricultural Extension Service and Continuing Education and Extension, and other members of the public and business sector responsible for fire protection. It is designed to expand the educational opportunities for persons employed by or concerned with municipal, institutional, and industrial fire protection; insurance inspection or rating bureaus; and manufacturers of protective equipment and systems.

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 may transfer credits for equivalent courses to this program from other institutions accredited by the University of Minnesota although a minimum of 12 credits must be earned at the University of Minnesota.

#### **English Requirement (4 credits)**

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

#### **Core Requirements (24 credits)**

FPRO 0001C Introduction to Fire Protection\*\*  
FPRO 0002C Hazardous Materials and Processes I\*\*  
FPRO 0003C Hazardous Materials and Processes II\*\*  
FPRO 0004C Fire Prevention and Control\*\*  
FPRO 0005C Fire Protection and Life Safety Systems in Building Design\*\*  
FPRO 0006C Institutional and Industrial Fire Protection\*\*  
FPRO 0007C Fire Department Administration\*\*  
FPRO 0008C Advanced Hazardous Materials\*\*

#### **Spread Requirement (18 credits)**

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

### **foster care education certificate**

(15 credits)

The overall objectives of this certificate program are to improve services to children in foster homes by recognizing the importance of and helping to increase the competency and clarity of the role definition of foster parents. There is no presumption of developing an "ideal" foster parent role (or social worker); rather, the foster parent is viewed as an extension of the legal responsibility and service vested by the court under the auspices of a recognized social agency. Both the foster parent and social worker are expected to develop a greater understanding of and sensitivity to the stresses experienced by foster children and to clarify their own role in assisting foster children and their parents to cope with these stresses.

The program must be taken in its entirety at the University of Minnesota. Each of the following courses will be taken for three quarter credits and it is recommended that they be taken in the order indicated:

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

For further information on this program and a listing of the quarterly offerings, write to the Department of Continuing Education in Social Work, 331 Nolte Center, University of Minnesota, Minneapolis 55455; or call (612) 373-5831.

### **general studies certificate (IS)**

(45 credits)

The General Studies Certificate program is designed to recognize students'

achievement after the completion of the equivalent of one year of college course work. There are no required courses in the program but students are encouraged to take advantage of courses in most of the general education curriculum areas of the General College—natural sciences, social sciences, business studies, humanities, and communications. Of the 45 credits required for the certificate, a minimum of 30 credits must be taken in General College courses. (A list of General College courses offered through Extension is found in the course offerings section.)

Students wishing to continue their education toward the Associate in Arts degree from the General College will find that all credits from this program will be accepted. For AA degree requirements, see University Degree Programs; Associate in Arts (AA) on page 354.

## human services certificate

(47 credits)

The Human Services Certificate was developed in response to the increasing demand for specialized certificates for paraprofessional staff in community service. Paraprofessionals engaged in the human services and in community development efforts in agencies such as public and private schools, nursery school, neighborhood health clinics, poverty agencies, housing authorities, social agencies, and community libraries may find the certificate useful for their personal development as well as their certification needs for advancing employment opportunities.

The certificate provides both background knowledge and career-related course work. Students have 22-27 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.

Students interested in following a degree program may, with careful planning, transfer credits earned for this certificate toward a degree in General College or the College of Liberal Arts.

Students transferring credits to this program from other institutions accredited by the University of Minnesota must take a minimum of 12 credits at the University of Minnesota.

Students should consult an Extension counselor before taking courses in the Concentration Requirement. Appointments may be arranged by calling 373-3905.

### Core Requirements (27 credits):

- GC 1421 Writing Lab: Personal Writing or Comp 1001 Introductory Composition; or Comm 1001 Communication  
GC 1461 Oral Communication: Basic Principles or Spch 1101 Fundamentals of Speech  
GC 1471 Creative Problem Solving  
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: Development of Human Societies or Soc 1001 Introduction to Sociology  
PubH 3001 Personal and Community Health

Concentration Requirement (GC 1627 Human Services Practicum and/or approved related courses) in one of the following fields (16 credits):

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

**Electives:** Additional courses from the following areas to make a minimum of 47 credits total for the certificate.

- GC 1285 Social Sciences: Cultural Anthropology or Anth 1002 Introduction to Anthropology: Cultural Anthropology
  - GC 1295 Economic Perspectives—General View
  - GC 1722 Home Life: Parent-Child Relationships or FSoS 1025 Parenthood
  - Geog 1302 Human Geography
  - GC 1233 United States: Problems of Government or Pol 1001 American Government and Politics
  - GC 1281 Psychology of Modern Society or Psy 1001 General Psychology
  - CPsy 1301 Child Psychology
  - SSci 3203 Structure and Dynamics of Poverty
  - Rhet 1147 Efficient Reading
- Up to 6 credits in art, music, literature, humanities, in either General College or Liberal Arts courses

## **interior design certificate**

(60 credits)

**Note:** All of the Interior Design courses for the Certificate are now assigned to the Design Department in the College of Home Economics. The courses involved are essentially the same in content. Moving them from the Studio Art Department facilitated relationships with the 4-year degree program in Interior Design. Some classes offered as part of the Interior Design program may, upon petition, be used in a degree program. See page 109 for old and new numbers.

All courses used in the certificate program will be in the x4xx series with the exception of Dsgn 1521, to better differentiate from the degree program courses which will be in the x5xx series.

Students wishing to transfer from the certificate to the degree program will need to follow the usual procedure for transfer of credit evaluation and to submit materials for portfolio review as required for all degree applicants.

The Interior Design Certificate is awarded upon successful completion of a program of courses in interior design and related fields. The interior design courses have been approved by the American Society of Interior Designers. Completion of the certificate should indicate a background of proficiency in the field of home furnishings and decorating.

Students transferring credits to this program from other institutions accredited by the University of Minnesota must take a minimum of 15 credits at the University of Minnesota.

### **Core Requirement (47-48 credits)**

- Dsgn 1450 Drafting; Basic Drafting Techniques
- Dsgn 1455 Interior Design I
- Dsgn 1456 Interior Design II
- Dsgn 1521 Use of Color
- Dsgn 3450 Perspective and Presentation Sketches
- Dsgn 3451 Interior Design Rendering
- Dsgn 3455 Seminar in Interior Design
- Dsgn 3456 Seminar in Interior Design
- Dsgn 3477 Contract Design Seminar
- Arth 1001 Introduction to the Visual Arts
- Comp 1001 Introductory Composition or Comm 1001 Communication or Comp 0004C Business Correspondence
- 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, Foreign Language, Humanities, Literature, Social Sciences
2. Ceramics, Drawing and Painting, Sculpture, Printmaking, Photography
3. Dsgn 0400C Home Design and Planning  
Dsgn 0437C Crafts Material  
Dsgn 1428 Interior Design Layout  
Dsgn 3412 History of Traditional Furniture  
Dsgn 3457 Interior Design Specifications  
Dsgn 3463 Interior Design: Housing, and the Urban Environment  
Dsgn 3467 Interior Design: Housing, and Dynamics and Policy  
Dsgn 3460, 3461 Interior Design Clinic
4. Dsgn 3459 Interior Design Business  
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 (IS)**

(45 credits)

The program of the Liberal Arts Certificate is offered to students who wish an introduction to a liberal arts education. It is the equivalent of 1 full-time year of university-level study. With careful planning, the certificate may constitute the freshman year of a degree program in arts or business fields. Students transferring credits to this program from other institutions accredited by the University of Minnesota must take a minimum of 12 credits at the University of Minnesota.

**English Requirement** (8 credits):

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

**Spread Requirement** (32 credits) 8 credits in each of the following groups:

Group A Communication, Language, Symbolic Systems: accounting, computer science, composition (other than freshman English requirement) journalism, language, philosophy, mathematics, speech, statistics

Group B Physical and Biological Sciences: astronomy, biology, botany, chemistry, ecology, geology, physics

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

Group D Artistic Expression: art, architecture, classics, humanities, literature, music, theatre arts

**Electives:** Additional liberal arts courses to make a minimum of 45 credits total for the certificate.

Students interested in the Liberal Arts Certificate should be sure to call 373-3905 for a copy of CLA courses meeting the Group Distribution requirements offered through Extension before taking any courses.

## **mathematics and science certificate (IS)**

(45 credits)

Students transferring credits to this program from other institutions accredited by the University of Minnesota must take a minimum of 12 credits at the University of Minnesota.

**Prerequisite:** 2 years of algebra and 2 years of geometry including trigonometry.



**Core Requirement (24 credits):**

Comp 1001 Introductory Composition or Comm 1001 Communication  
Math 1211 Analysis I  
Math 1221 Analysis II  
Math 1231 Analysis III  
Math 3211 Analysis IV

**Electives:** Additional courses to make a minimum total of 45 credits, selected from the following areas:

Astronomy  
Chemistry  
Engineering  
Geology  
Aerospace Engineering and Mechanics  
Physics

**police administration certificate (IS)**

(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 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 1031 American Public Policy  
Hist 1301, 1302 American History  
SW 1001 or 3001 Introduction to American Social Welfare and Community Services  
Soc 1002 American Community  
Soc 5951 Minority Group Relations

**chemical dependency counseling certificate**

(22 to 31 credits including completion of internship)

The basic courses for this program are offered by the School of Public Health through Continuing Education and Extension. Requirements for the certificate

include completion of the basic and specialized courses, plus a successful internship program. Additional coursework may also be available on an invitational basis.

The courses are designed to train individuals to assist professional counselors working with alcoholism and other forms of drug abuse. While planned specifically for paraprofessionals interested in chemical dependency counseling careers, the courses are also offered on a limited basis to educators, clergymen, nurses, law enforcement personnel, social workers, psychologists, and other professional persons who feel this additional special training would help them in dealing with or disseminating information about alcoholism and other drug abuses. The sequence is not to be considered in lieu of a professional degree in counseling, nor does successful completion guarantee employment.

A separate rotating internship experience in approved and affiliated institutions under professional supervision will be provided on the basis of the availability of placements for selected applicants who have successfully completed the basic courses. Successful completion of the internship program will lead to the certificate. Prior or concurrent institutional experience may be submitted in part by petition to the Internship Program Coordinator. Details of the internship program will be provided to students applying for enrollment in the courses.

Persons wishing to apply for admission to the program should write to Mr. Dennis A. Armstrong, Program Director, 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 1 and January 15 for the Spring Quarter.

Students interested in continuing their education at the University of Minnesota may wish to use their Public Health credits toward the Human Services Certificate offered through Extension, the Human Services Generalist Program offered through General College, or other degrees and certificates offered by the University.

**Since the Human Services Generalist Program is highly selective, students should be sure to call General College, 373-5701 before applying for admission to the Program.**

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

**Requirements (19 credits and completion of internship):**

- PubH 3030 Fundamental Aspects of Drug Abuse and Dependency
- PubH 3031 The Disease Process and Social Implications of Drug Dependency
- PubH 3032 Counseling the Alcoholic and Other Drug Dependent Persons
- PubH 3036 Basic Helping Skills
- PubH 3035 Internship in Alcohol and Drug Abuse
- PubH 3037 Chemical Dependency: A Family Illness
- PubH 5036 Group Counseling in Chemical Dependency

## **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.

Applications to the program will be accepted until August 1. Notification of acceptance will be given in late August. Interested students wishing to receive more information about the program should write to: Program Director, Educational Study Association, 1575 University Avenue, St. Paul, Minnesota 55104.

## **social work certificate**

As indicated in the 1975-76 Extension **Bulletin**, the Personal Social Services Certificate Program has been terminated. It is now possible to acquire a Bachelor of Arts Degree in Social Welfare through Extension Classes (see bulletin page 284) as well as through the day school.

Although the certificate program as such is no longer available, students may package course offerings to constitute a coherent program applicable to individual needs, both short and long term. In addition to basic social work courses, students may register for specialized, topical and refresher courses offered through the School of Social Work's Department of Continuing Education in Social Work (for specific course listings, see bulletin page 286). These courses continue to carry Certificate Credit, as distinguished from degree credits, and are designed to be relevant to individual work settings in such special areas as corrections, aging, management, family and child welfare, interviewing, foster care, mental health, etc. All such certificate credits earned appear on an Extension transcript available in the Admissions and Records Office.

**Any individuals interested in more detailed information on these courses or other programs offered through this Department may obtain a copy of the annual Departmental brochure by writing to the Department of Continuing Education in Social Work, 331 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**

(52-53 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 1111 College Algebra and Analytic Geometry or equivalent	BFin 3000 Finance Fundamentals
Acct 1050-1051 or Acct 1024-1025, 1026 Principles of Accounting	QA 1050 Elementary Managerial Statistics

## **senior accounting**

(93-94 credits)

Students transferring credits to this program from other institutions accredited by the University of Minnesota must take a minimum of 24 credits in accounting courses at the University of Minnesota.

### **Requirements:**

Comp 1001-1002 Introductory Composition or Comm 1001-1002 Communication or equivalent  
Comp 1027 Advanced Writing  
Econ 1001, 1002 Principles of Economics  
Math 1131 Finite Mathematics or Math 1111 College Algebra and Analytic Geometry or equivalent  
Math 1142 Introduction to Calculus of One and Several Variables  
QA 1050 Elementary Managerial Statistics  
Acct 1050-1051 or Acct 1024-1025, 1026 Principles of Accounting  
Acct 3105-3106, 3107 Intermediate Accounting  
Acct 3220-3221 Cost Accounting  
12 credits of accounting electives  
BFin 3000 Finance Fundamentals  
BLaw 3058 Business Law

Sixteen credits from the following:  
Econ 3101 Microeconomic Theory  
BGS 3002 Business and Society  
IR 3002 Industrial Relations Systems  
Ins 3100 Risk Management and Insurance  
OAM 3000 Introduction to Operations Management  
QA 3055 Introduction to Management Science  
Tran 3054 Fundamentals of Transportation  
Mktg 3000 Principles of Marketing  
Mgmt 3001 Fundamentals of Management  
Mgmt 3004 Business Policy: Strategy Formulation and Implementation  
MIS 3099 Elementary Fortran

## **business administration certificates**

These certificate programs have been approved by the College of Business Administration and arranged under the supervision of members of the faculties concerned. They are designed to present integrated, high quality, university-level courses of study of shorter length and scope than the full 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**

(45-46 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 (33-34 credits)**

Comp 1001-1002 Introductory Composition or Comm 1001-1002 Communication or equivalent  
 Econ 1001, 1002 Principles of Economics  
 QA 1050 Elementary Managerial Statistics

Acct 1050-1051 or Acct 1024-1025, 1026 Principles of Accounting  
 Math 1131 Finite Mathematics or Math 1111 College Algebra and Analytic Geometry or equivalent

**Core Requirement (12 credits)**

Econ 3101 Microeconomic Theory  
 BGS 3002 Business and Society  
 QA 3055 Introduction to Management Science  
 MIS 5100 Introduction to Computers and Computer Data Processing  
 IR 3002 Industrial Relations Systems  
 Ins 3100 Risk Management and Insurance  
 Tran 3054 Fundamentals of Transportation

BFin 0001C Introduction to Investments  
 BFin 3000 Finance Fundamentals  
 Mktg 3000 Principles of Marketing  
 BLaw 3058 Business Law  
 Mgmt 3001 Fundamentals of Management  
 Mgmt 3004 Business Policy: Strategy Formulation and Implementation  
 Math 1142 Introduction to Calculus of One and Several Variables  
 MIS 3099 Elementary Fortran

**senior business administration certificate**

(90-91 credits)

The Senior Business Administration Certificate is a continuation of the Junior Certificate, expanding the core and spread requirement to provide a broader base of general knowledge and an opportunity for specialization. The completion of the certificate requirement of 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 (38-39 credits):**

Comp 1001-1002 Introductory Composition, or Comm 1001-1002 Communication or equivalent  
 Econ 1001, 1002 Principles of Economics  
 Acct 1050-1051 or Acct 1024-1025, 1026 Principles of Accounting  
 QA 1050 Elementary Managerial Statistics

Math 1131 Finite Mathematics or Math 1111 College Algebra and Analytic Geometry or equivalent  
 Math 1142 Introduction to Calculus of One and Several Variables

**Core Requirement (24 credits):**

OAM 3000 Introduction to Operations Management  
 QA 3055 Introduction to Management Science  
 MIS 5100 Introduction to Computers and Computer Data Processing  
 BFin 0001C Introduction to Investments  
 BGS 3002 Business and Society  
 BFin 3000 Finance Fundamentals  
 Mktg 3000 Principles of Marketing

BLaw 3058 Business Law  
 IR 3002 Industrial Relations Systems  
 Ins 3100 Risk Management and Insurance  
 Tran 3054 Fundamentals of Transportation  
 Mgmt 3001 Fundamentals of Management  
 Mgmt 3004 Business Policy: Strategy Formulation and Implementation  
 MIS 3099 Elementary Fortran

**Electives in the College of Business Administration:** At least 16 additional credits in courses in business administration. These may be selected from the core group above or from other courses.

**Other Electives:** Non-business courses from areas such as physical and biological science, man and society, and artistic expression to make a minimum of 90 credits for the certificate.

**Note:** Students contemplating continuing toward a degree from the College of Business Administration should select electives which could become part of the degree program. These students are therefore urged to complete the prebusiness degree requirements.

## credit and financial management certificate

(63-65 credits)

The Credit and Financial Management Certificate program was developed cooperatively by Continuing Education and Extension and the College of Business Administration of the University of Minnesota and the North Central Credit and Financial Management Association. The program is directed to students seeking careers in trade credit management, commercial bank and finance company loan management, and ultimate senior executive positions in financial management.

Specialized training and skills are necessary in the administration of accounts receivable in today's business. The Trade Credit Manager must often function as adviser to his customers. Analyzing lines of credit requires that he be familiar with all financial and marketing aspects of his customer's business. He must also be able to communicate and work with top management of his company toward the integration of sales and financial goals, and thus is in a unique position to advance to senior management positions.

Students transferring credits to this program from other institutions accredited by the University of Minnesota must take a minimum of 16 credits at the University of Minnesota.

Completion of the certificate qualifies the student for the Associate and Fellow Awards of the National Institute of Credit. Persons interested should telephone or write Mr. E. Norman Eck, 330 Plymouth Building, Minneapolis, Minnesota 55402, telephone 371-3951.

### Core Requirement (55-57 credits):

Acct 1050-1051 or Acct 1024	1026, Principles of Accounting	Acct 3160	Analysis of Financial Statements	BLaw 3058-3078, 3088	Business Law	Econ 1001, 1002	Principles of Economics	BFin 0002C	Credit and Financial Management Problems	Acct 3000	Supervision I: Elements of Supervision	Mgmt 3002	Psychology in Management	Mktg 3000	Principles of Marketing	Mktg 0087C	Credits and Collections	Comp 0004C	Business Correspondence	Comp 1531	Business Writing	Comp 0010	Beginning Speech—Communication
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### Electives (8 credits):

Acct 3105	Intermediate Accounting	Acct 3220	Cost Accounting	Econ 3751	Money and Banking	BFin 0001C	Introduction to Investments	BFin 3000	Finance Fundamentals	BFin 3100	Financial Management	Ins 8100	Risk Management and Insurance	Mgmt 3001	Fundamentals of Management	Mktg 3080	Industrial and Governmental Procurement	Tran 3054	Fundamentals of Transportation	Comp 0003C	Review of Business English
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## industrial relations certificate

(45 credits)

This program of study is arranged and coordinated by the Department of Industrial Relations of the College of Business Administration. It is designed to provide technical training in the field of industrial relations and in the use of specialist techniques. Advanced professional training in Industrial Relations is available only through the M.A. and Ph.D. programs. See **Graduate School Bulletin**.

Caution: Courses at the 3xxx level are taught primarily for juniors and seniors. Courses taught at the 5xxx level are taught primarily for juniors, seniors, and graduate-level students.

Students transferring to this program from other institutions accredited by the University of Minnesota must take a minimum of 12 credits at the University of Minnesota.

### Core Requirement (33 credits):

Econ 1001, 1002 Principles of Economics	IR 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

### Electives (12 credits):

Econ 3501 Labor Economics	Econ 5534 Economic Security
Econ 5541 Contemporary Labor Issues	Econ 5561 Wages and Employment
Econ 3551 Labor Economics	GC 1081, 1082 Personnel Selection Techniques
Econ 5537 Labor Market Behavior and Regulation	IR 3000 Topics in Industrial Relations
IR 0007C Occupational Safety and Health	Psy 5501 Vocational Psychology
IR 0001C, 0002C Supervision I, II	Psy 5701 Personnel and Industrial Psychology
MIS 5101 Introduction to Management Information Systems	QA 3055 Introduction to Management Science
Psy 3124 Psychology of Individual Differences	Soc 5201 Introduction to Social Psychology
Psy 5044 Psychology of Motivation and Conflict	Soc 5411 Formal Organization
Psy 3011 Introduction to the Psychology of Learning	IEOR 0100C Industrial Engineering and Management
	IEOR 0210C Motion and Time Study
	IEOR 0408C, 0409C Corporate Standard Data I, II
	Mgmt 3002 Psychology in Management

## information systems analysis and design certificate

(51 credits)

The Information Systems Analysis and Design Certificate program was developed cooperatively by Continuing Education and Extension, the College of Business Administration, and leading Minnesota firms. The program is directed toward students planning careers in information processing and toward those already working in the field who wish to improve their skills. The course sequence is arranged so that it is applicable to students entering with a high school or vocational-technical school diploma and to students who have completed college degrees.

Beginning with introductory computer programming courses, the student works toward the development of analysis and design skills useful in the field of Management Information Systems and Information Processing. The Information Systems Analysis and Design Certificate Program provides education and training which can open the way to responsible positions in computer information processing.

Students transferring credits to this program from other institutions accredited by the University of Minnesota must take a minimum of 15 credits at the University of Minnesota.

Students deficient in Mathematics should take MIS 0140C, Mathematical Foundations of Systems Analysis, prior to the Certificate courses.

Students with no computer experience or training should take MIS 3040, Organizational Use of Computers, before beginning the Certificate courses.

#### **Core Requirement (20 credits)**

MIS 5100 Introduction to Computers and Computer Data Processing  
Acct 1050 Principles of Accounting I  
Acct 1051 Principles of Accounting II  
QA 1050 Elementary Managerial Statistics  
Mgmt 3001 Fundamentals of Management

#### **Programming Requirement (3 credits):**

MIS 3098 Elementary COBOL  
MIS 3099 Elementary FORTRAN  
MIS 5098 Intermediate COBOL

#### **Concentration Requirement (28 credits):**

MIS 5101 Introduction to Management Information Systems  
MIS 5102 Introduction to Information Systems Analysis  
MIS 5103 Data Structures and File Processing  
MIS 3131 Database Management Systems  
MIS 3132 Data Communication Systems  
MIS 3151 Administration and Control of Management Information Systems  
QA 3055 Introduction to Management Science

## **management of administrative services certificates**

The Management of Administrative Services Certificate program has been developed by Continuing Education and Extension in cooperation with the College of Business Administration and the Administrative Management Society.

These university-level certificate programs are designed especially for those management employees who have not received such training in schools of business or commerce, in order to assist them in becoming more competent in their present positions and to improve their opportunities for advancement. In

completion of the prescribed programs, the student may be entitled to certificates of the Administrative Management Society. Persons interested in the latter certificates may telephone or write Education Director, Administrative Management Society, 1414 Soo Line Bldg., Minneapolis, Minnesota 55402, telephone 933-4200.

### **associate in management of administrative services certificate**

(45-47 credits)

Students transferring credits to this program from other institutions accredited by the University of Minnesota must take a minimum of 12 credits at the University of Minnesota.



**Core Requirement (41-43 credits):**

Comp 0003C Review of Business English or Comp 0004C Business Correspondence, or Comp 1001 Introductory Composition, or Comm 1001 Communication or equivalent  
 Econ 1001, 1002 Principles of Economics  
 Acct 1050-1051 or Acct 1024-1025, 1026 Principles of Accounting

Math 1131 Finite Mathematics or Math 1111 College Algebra and Analytic Geometry or equivalent  
 BLaw 3058 Business Law  
 MIS 5100 Introduction to Computers and Computer Data Processing  
 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 to make a minimum of 45 credits total for the certificate.

**fellow in management of administrative services certificate**

(90-91 credits)

Students transferring credits to this program from other institutions accredited by the University of Minnesota must take a minimum of 24 credits at the University of Minnesota.

**Core Requirement (41-43 credits):**

Comp 0003C Review of Business English and Comp 0004C Business Correspondence or Comp 1001-1002 Introductory Composition or Comm 1001-1002 Communication or equivalent  
 Econ 1001, 1002 Principles of Economics  
 Acct 1050-1051 or Acct 1024-1025, 1026 Principles of Accounting

BLaw 3058 Business Law  
 MIS 5100 Computers and Systems Design  
 Math 1131 Finite Mathematics or Math 1111 College Algebra and Analytic Geometry or equivalent  
 Psy 1001 General Psychology  
 Psy 3801 Introduction to Statistical Methods

**Group Requirements (36 credits):****Group I**—At least four courses from the following (16 credits):

IR 3002 Industrial Relations Systems  
 Mgmt 3002 Psychology in Management  
 BFin 0001C Introduction to Investments  
 BFin 3000 Finance Fundamentals  
 Ins 3100 Risk Management and Insurance  
 Mktg 3000 Principles of Marketing

**Group II**—At least five courses from the following (20 credits):

BFin 3100 Financial Management  
 Tran 3054 Fundamentals of Transportation  
 Acct 3160 Analysis of Financial Statements  
 IR 3010 Human Relations and Applied Organization Theory  
 Acct 3255 Managerial Costs or Acct 3220 Cost Accounting  
 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 science—45 credits**

The initial Undergraduate Development Certificate in Computer Science (UDC) is designed to provide maximum exposure to computer science in a 45 credit program. It should be recognized, however, that this concentration is achieved at the expense of related scientific and general non-technical topics. Students subsequently pursuing degree programs will be required to make up these deficiencies. Potential degree students should make early contact with the Department of Computer Science.

The UDC in Computer Science—45 credits can represent a first step for a student with college-level ability into a field of technical and scientific computer application. It can also provide a means of broadening the perspectives and skills of persons already employed at the programmer or technician level.

Students transferring credits to this program from other institutions accredited by the University of Minnesota must take a minimum of 12 credits at the University of Minnesota.

**Core Requirement (27 credits):**

Math 1311-1321-1331	Computer Calculus I-II-III or	Comp 1001-1002	Introductory Composition or equivalent
Math 1211-1221-1231	Analysis I-II-III	CSci 3001	Perspectives on Computers and Society

**Concentration Requirement (16 credits):**

CSci 1100-1101	Introduction to Fortran Programming I-II or	CSci 3105-3106	Fundamentals of Algorithms and Languages I-II
CSci 3101	A Fortran Introduction to Computer Programming	CSci 5101	Structure and Programming of Software Systems I

**Electives:**

††Non-Technical electives to make a minimum of 45 credits for the certificate.

## **undergraduate development certificate in computer science—90 credits**

This certificate continues the development of the undergraduate core curriculum begun in the Undergraduate Development Certificate in Computer Science—45 credits. The CSci courses provide a base for later specialization while related technical electives give exposure to at least one technical discipline of particular interest to the student.

If a student's objective is an undergraduate degree, planning of the completion of this certificate should include early consultation with a CSci adviser.

Students transferring credits to this program from other institutions accredited by the University of Minnesota must take a minimum of 24 credits at the University of Minnesota, including those taken for the UDC in Computer Science—45 credits.

**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	CSci 5102	Structure and Programming of Software Systems II

**Concentration Requirement (12 credits in one area):**

**AREA A**

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

**AREA B**

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

**AREA C**

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

††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 Science.

## **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 CSci 1100-1101 Introduction to Fortran Programming I-II or CSci 3101 A Fortran Introduction to Computer Programming		Composition or equivalent

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

\*Institute of Technology nontechnical electives may be chosen from the following fields: anthropology, art, biological sciences, botany, classics, economics, geography, history, humanities, languages (except scientific language courses), literature, music theory, philosophy, political science, psychology, religion, social science, sociology, speech, zoology and others.

## undergraduate development certificate in engineering and science—90 credits

(Includes 45 credits from Undergraduate Development Certificate in Engineering and Science)

This certificate is designed for students who have an engineering degree objective and who wish to continue working toward one of the engineering curriculums of the Institute of Technology. It will also be of value to 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
AEM 3016	Deformable Body Mechanics	ME 3900	Introduction to Engineering
AEM 3036	Dynamics		Statistics
EE 1510	Elements of Electrical Engineering		

**Electives:** Courses from nontechnical or biological science electives††, or mathematics or chemistry or physics or Engl 3085 (I of T) or additional courses from the spread requirement to make a minimum of 90 credits total for the certificate.

††Institute of Technology nontechnical electives may be chosen from the following fields: anthropology, art, biological sciences, botany, classics, economics, geography, history, humanities, languages (except scientific language courses), literature, music theory, philosophy, political science, psychology, religion, social science, sociology, speech, zoology and others (see 1975-1977 I of T bulletin).

## **undergraduate development certificate in civil engineering—90 credits**

(Includes 45 credits from Undergraduate Development Certificate in Engineering and Science)

The Undergraduate Development Certificate in Civil Engineering—90 credits, enables a student to continue the Undergraduate Development Certificate work in courses normally required in Civil Engineering degree programs and establishes the prerequisite work needed to pursue courses at the third year level. Elective credits may be chosen from third year offerings in civil engineering. It is designed to help engineering technicians assume a role of increased responsibility in working with civil engineers. It also represents a coherent body of study in helping determine whether further work toward a civil engineering degree should be pursued. Upon acceptance by the Institute of Technology, a student may transfer appropriate work completed in a certificate program to a bachelor's degree program.

Students transferring credits to this program from other institutions accredited by the University of Minnesota must take a minimum of 24 credits at the University of Minnesota, including those taken for the UDC in Engineering and Science—45 credits.

**Prerequisite:** Completion of the UDC in Engineering and Science—45 credits.

**Core Requirement** (25 credits selected from the following):

Math 3211	Analysis IV	Phys 1291-1295	General Physics and Laboratory
Math 3221	Introduction to Linear Algebra and Linear Differential Equations or Math 1250 Calculus V	AEM 1015	Statics
Chem 1004-1005	General Principles of Chemistry	AEM 3016	Deformable Body Mechanics
		AEM 3036	Dynamics
		CE 3400	Fluid Mechanics

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

CE 3100	Surveying
CE 3104	Field Surveying
CE 3200	Introduction to Transportation Engineering
CE 3300	Elements of Soil Mechanics
CE 3400	Fluid Mechanics (if not taken in core requirement)
CE 3500	Introduction to Environmental Engineering
CE 3700	Introduction to Construction Materials
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 responsibility in working with electrical engineers. It also represents a coherent body of study in helping determine whether further work toward an electrical engineering degree should be pursued. Upon acceptance by the Institute of Technology, a student may transfer appropriate work completed in a certificate program to a bachelor's degree program.

Students transferring credits to this program from other institutions accredited by the University of Minnesota must take a minimum of 24 credits at the University of Minnesota, including those taken for the UDC in Engineering and Science—45 credits.

**Prerequisite:** Completion of the UDC in Engineering and Science—45 credits.

**Core Requirement** (minimum of 36 credits selected from the following):

Math 3211	Calculus IV	Phys 1291-1295	General Physics and Laboratory
Math 3221	Introduction to Linear Algebra and Linear Differential Equations	Third Year Electrical Engineering courses (3XXX-5XXX)	
Math 3231	Vector Analysis		
EE 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	EE 5051	Introduction to Logic Design
EE 5050	Nonlinear Electronic Circuits	EE 5053	Design: Digital Circuits
EE 3100	Electromagnetic Fields I	EE 5055	Linear Electronic Circuits
EE 3101	Electromagnetic Fields II	Engl 3085	Technical Writing for Engineers
EE 5100	Electromagnetic Fields III	Math 3061	Operation Methods for Linear Systems
EE 5000	Linear System Analysis	EE 5552	Design: Digital Systems
EE 5001	Linear System Analysis		
EE 3010-3011-3012	Circuits, Signals and Systems		

††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 1975-1977 I of T bulletin).

**NOTE:** Students working toward a degree should check with an I or T adviser before choosing electives.

**Electives:** Courses from nontechnical (maximum 6 credits)<sup>††</sup> or technical electives (including fourth year courses in electrical engineering) to make a minimum of 135 credits for the Certificate.

## **undergraduate development certificate in industrial engineering—90 credits**

(Includes 45 credits from Undergraduate Development Certificate in Engineering and Science)

The Undergraduate Development Certificate in Industrial Engineering—90 credits enables a student to continue the Undergraduate Development Certificate work in courses normally required in Industrial Engineering degree programs and establishes the prerequisite work needed to pursue courses at the third-year level. It is designed to help engineering technicians assume a role of increased responsibility in working with industrial engineers. It also represents a coherent body of study in helping determine whether further work toward an industrial engineering degree should be pursued. Upon acceptance by the Institute of Technology a student may transfer appropriate work completed in a certificate program to a bachelor's degree program.

Students transferring credits to this program from other institutions accredited by the University of Minnesota must take a minimum of 24 credits at the University of Minnesota, including those taken for the UDC in Engineering and Science—45 credits.

**Prerequisite:** Completion of the UDC in Engineering and Science—45 credits.

### **Core Requirement (26 credits):**

CICS 3101 A Fortran Introduction to Computer Programming  
Math 3221 Introduction to Linear Algebra Equations and Linear Differential Equations  
Stat 3091 Probability and Statistics or  
ME 3900 Introduction to Engineering Statistics  
IEOR 5000 Introduction to Industrial Engineering Analysis  
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

<sup>††</sup>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 1975-1977 I of T 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.

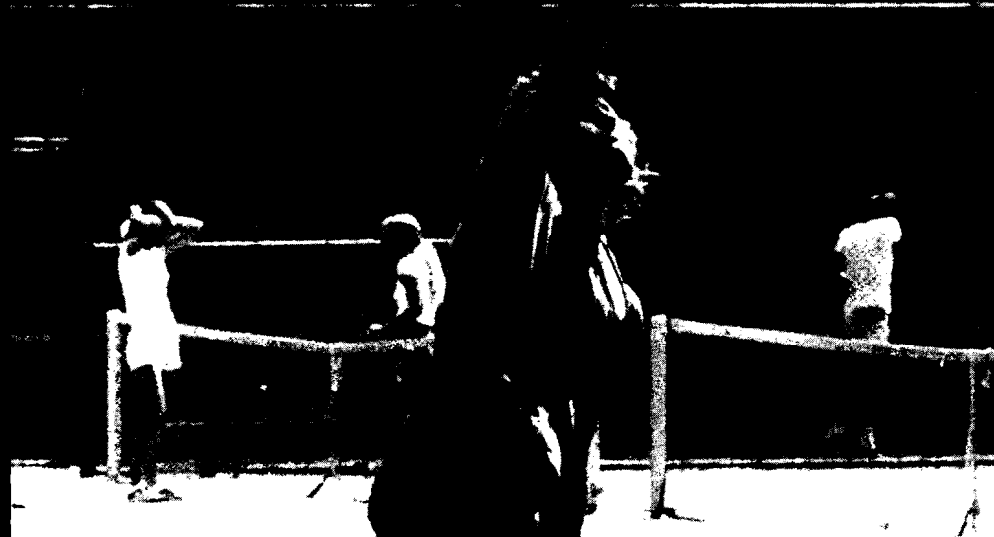
### **Core Requirement (38 credits):**

CICS 3101 A Fortran Introduction to Computer Programming  
Math 3221 Introduction to Linear Algebra and Linear Differential Equations  
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.



numbering/symbols/maps/  
**abbreviations**

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abbreviations and addresses for	
off-campus classes .....	403
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## course numbering

All University courses for 1976-77 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 45.

## symbols

The following symbols are used throughout this Bulletin:

- A hyphen between numbers indicates a sequence course, the units of which must be taken in order, unless otherwise indicated.
- ★ Enrollment space limited. See instructions on registration in limited-enrollment classes, page 23. Limited-enrollment classes or sections are printed in red in this **Bulletin**.
- † All courses listed before dagger must be completed before credit may be received.
- § No credit is given if credit has been received for equivalent course listed after section mark.
- ‡ Means "concurrent registration in" (i.e., course must be taken simultaneously).
- ‡ Consent of instructor.
- (IS) Course also available through Department of Extension Independent Study.
- ◆ Regular credit course open for registration on a reduced, no-credit, tuition plan (see page 49).

cr Credit

Qtr Quarter

Sem Semester

Spec Special Term

S/N Pass/No credit grading system. See page 43.

A/N Letter grading system. See page 43.

## abbreviations for off-campus classes

The following abbreviations for off-campus class sites are used throughout this Bulletin:

<b>Arboretum, Chaska</b>	Minnesota Landscape Arboretum, Highway 5, Chaska, Minnesota 55318
<b>Brooklyn Ctr HS</b>	Brooklyn Center High School 6500 Humboldt Ave. N., Brooklyn Center 55429
<b>Buffalo JHS</b>	Buffalo Junior High School (Middle School) Buffalo, Minnesota 55313
<b>Cambridge HS</b>	Cambridge High School Cambridge, Minnesota 55008
<b>Elim Chrch, Robbinsdale</b>	Elim Church 40th and W. Broadway, Robbinsdale 55422
<b>Hillside JHS, Maplewood</b>	Hillside Junior High School 2051 E. Larpenteur Ave., Maplewood 55109
<b>Irondale HS, New Brighton</b>	Irondale High School 2425 Long Lake Rd., New Brighton 55112
<b>Jewish Community Ctr, StLPk</b>	Jewish Community Center 4330 S. Cedar Lake Rd., St. Louis Park 55426
<b>Kellogg HS, Little Canada</b>	Kellogg High School 15 E. County Road B2, Little Canada 55117
<b>Minnetonka HS</b>	Minnetonka High School 18301 Highway No. 7, Minnetonka 55343
<b>Nicollet JHS, Burnsville</b>	Nicollet Junior High School 400 E. 134th St., Burnsville 55337
<b>Richfield HS</b>	Richfield Senior High School 7001 Harriet Ave. S., Richfield 55423
<b>Sandburg JHS, Golden Valley</b>	Carl Sandburg Junior High School 2400 Sandburg Lane, Golden Valley 55427
<b>Southwest HS, Mpls</b>	Southwest High School 3414 W. 47th St., Minneapolis 55410
<b>StP Capitol Complex Buildings</b>	Civil Service Training Center 500 Rice Street, St. Paul 55103 Capitol Square Building 550 Cedar, St. Paul 55101 Administration Building 50 Sherburne, St. Paul 55103
<b>StP Talmud Torah</b>	The Talmud Torah of St. Paul 636 S. Mississippi River Blvd., St. Paul 55116
<b>WCCO Radio Bldg, Mpls</b>	WCCO Radio Building, Room 512 7th Street and 2nd Ave. S., Minneapolis 55402 (downtown)
<b>St Stephens Church, WStP</b>	St. Stephens Church 1575 Charlton, West St. Paul 55118

See course listings for these locations on page 421.  
See map on page 302.

## department abbreviations

Acct, Accounting  
AdPy, Adult Psychiatry  
AEM, Aerospace Engineering and Mechanics  
Afro, Afro-American Studies  
AgEc, Agricultural and Applied Economics  
AmIn, American Indian Studies  
AmSt, American Studies  
Anat, Anatomy  
ANEJ, Ancient Near Eastern and Jewish Studies  
Anth, Anthropology  
Arab, Arabic  
Arch, Architecture  
ArEd, Art Education  
ArH, Art History  
ArtS, Arts, Studio  
Ast, Astronomy  
Biol, Biology  
Bot, Botany  
BFin, Finance  
BGS, Business, Government, and Society  
BLaw, Business Law  
Chem, Chemistry  
Chic, Chicano Studies  
CPsy, Child Psychology  
Chn, Chinese  
CE, Civil and Mineral Engineering  
Clas, Classics  
Comm, Communication (English)  
Comp, English Composition  
CSci, Computer Science  
CSPP, Counseling and Student Personnel Psychology  
CJS, Criminal Justice Studies  
Dan, Danish  
Dsgn, Design  
Dtch, Dutch  
EAS, East Asian Studies  
EAL, East Asian Languages  
EBB, Ecology and Behavioral Biology  
Econ, Economics  
EdAd, Educational Administration  
EE, Electrical Engineering  
Elem, Elementary Education  
EG, Engineering Graphics  
Engl, English  
FPAd, Family Planning Administration  
FSoS, Family Social Science  
BFin, Finance (business)  
Fin, Finnish  
FScN, Food Science and Nutrition  
FS, Foreign Study  
ForP, Forest Products  
FR, Forest Resources  
Fren, French  
GC, General College  
GCB, Genetics and Cell Biology  
GeoE, Geo-Engineering  
Geog, Geography  
Geo, Geology and Geophysics  
Ger, German  
Grk, Greek  
Hebr, Hebrew  
Hist, History  
Hlth, School Health Education  
HMed, History of Medicine  
Hort, Horticultural Science  
HSci, History of Science and Technology  
HSU, Health Science Unattached  
Hum, Humanities  
Indc, Indic  
IC, Informal Courses  
IEOR, Industrial Engineering/Operations Research  
IR, Industrial Relations  
I of T, Institute of Technology  
Ins, Insurance  
IIA, Insurance Institute of America  
CLU, American College of Life Underwriters  
Ital, Italian  
Jpn, Japanese  
JwSt, Jewish Studies  
Jour, Journalism and Mass Communication  
LMed, Laboratory Medicine  
LA, Landscape Architecture  
LAS, Latin American Studies  
Lat, Latin  
Lib, Library Science  
Ling, Linguistics  
Math, Mathematics  
Mgmt, Management  
MIS, Management Information Systems  
Mktg, Marketing  
ME, Mechanical Engineering  
MedT, Medical Technology  
MetE, Metallurgical Engineering  
MicB, Microbiology  
MidE, Middle Eastern Studies  
MinE, Mineral Resources Engineering  
MdGk, Modern Greek  
Mus, Music  
MuEd, Music Education  
NSci, Natural Science and Technology  
Nor, Norwegian  
Nurs, Nursing  
OAM, Operations Analysis, Management

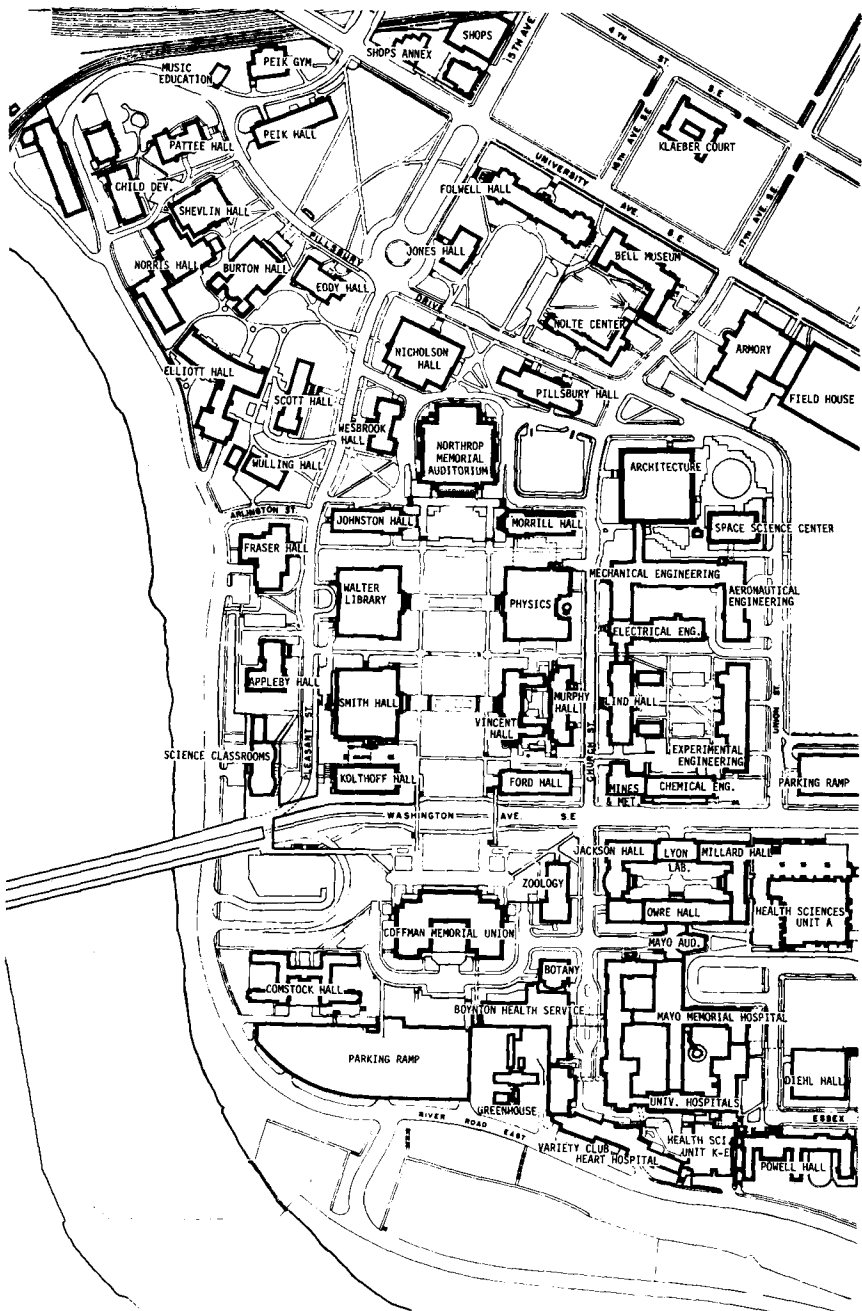
PA, Public Affairs  
PO, Personal Orientation  
Phil, Philosophy  
PE, Physical Education and  
Recreation  
PMed, Physical Medicine and  
Rehabilitation  
Phcg, Pharmacognosy  
Phys, Physics  
Phsl, Physiology  
PIPa, Plant Pathology  
Plsh, Polish  
Pol, Political Science  
PsyF, Psychological Foundations  
Psy, Psychology  
PubH, Public Health  
QA, Quantitative Analysis  
RE, Real Estate  
Rec, Recreation, Park and  
Leisure Studies  
RelS, Religious Studies  
Rhet, Rhetoric  
Russ, Russian

Scan, Scandinavian Languages  
Hlth, School Health Education  
SchP, Psychology in the Schools  
Training Program  
SeEd, Secondary Education  
Slav, Slavic and East European  
Languages  
SSci, Social Science  
SW, Social Work  
Soc, Sociology  
Soil, Soil Science  
Span, Spanish  
SpEd, Special Education  
Spch, Speech-Communication  
Swed, Swedish  
TexC, Textiles and Clothing  
Th, Theatre Arts  
Tran, Transportation  
UC, University College  
UrbS, Urban Studies  
VM, Veterinary Medicine  
WoSt, Women's Studies  
YoSt, Youth Studies

## campus building abbreviations

Aero, Aeronautical Engineering  
AgEng(StP), Agricultural Engineering  
AH, Appleby Hall  
AlderH (StP), Alderman Hall  
AndH, Anderson Hall  
Arch, Architecture  
Armory, Armory Bldg.  
ArtB, Art Building (2020 Washington Ave. So., Minneapolis)  
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  
DiehlH, Diehl Hall  
DinC(StP), Dining Center  
EdH, Eddy Hall  
Elth, Elliott Hall  
Ex, Experimental Engineering  
FolH, Folwell Hall  
ForH, Ford Hall  
FP(StP), Forest Products  
FraH, Fraser Hall  
FScN(StP), Food Science & Nutrition  
GH (StP), Greenhouse  
HckrH(StP), Haecker Hall  
Hodson H (StP), Hodson Hall  
HolB, Holman Building (2035 University Ave.)  
Hr(StP), Horticulture (old building)  
HrG(StP), Horticulture Greenhouse  
HS, Health Service  
HSUnitA, Health Sciences Unit A  
Jach, Jackson Hall.  
JohH, Johnston Hall  
Jones, Jones Hall  
KlaCt, Klaeber Court  
Kolth, Kolthoff Hall  
Lindh, Lind Hall  
MacP, MacPhail Center (1128 LaSalle Ave., Minneapolis)  
Mayo, Mayo Memorial Hospital  
McNH(StP), McNeal Hall  
MechE, Mechanical Engineering  
MinMet, Mines & Metallurgy  
MlrdH, Millard Hall  
MMA, Mayo Memorial Auditorium  
MNH, Bell Museum of Natural History  
MRRC, Mineral Resources Research Center  
MSciL(StP), Meat Science Laboratory  
MurH, Murphy Hall  
MusEd, Music Education  
NCCE, Nolte Center for Continuing Education  
NorriSH, Norris Hall  
NH, Nicholson Hall  
NMA, Northrop Memorial Auditorium  
NorH(StP), North Hall  
OMWL, O Meredith Wilson Library  
Owre, Owre Hall  
PeikH, Peik Hall  
Ph, Tate Laboratory of Physics  
PillsH, Pillsbury Hall  
PoH, Powell Hall  
PolDB, Police Department Bldg.  
Pt, Pattee Hall  
RarigC, Rarig Center  
SBkSt, Smith Bookstore  
Sch, Scott Hall  
SciCB, Science Classroom Bldg.  
ShopsB, Shops Bldg.  
SmithH, Smith Hall  
So(StP), Soils  
SocSci, Social Sciences Bldg.  
Stad, Stadium  
StakH(StP), Stakman Hall of Plant Pathology  
TNM, Temporary North of Mines  
VetC(StP), Veterinary Clinic  
VH, Vincent Hall  
WaLib, Walter Library  
WeH, Wesbrook Hall  
WuH, Wulling Hall  
Z, Zoology



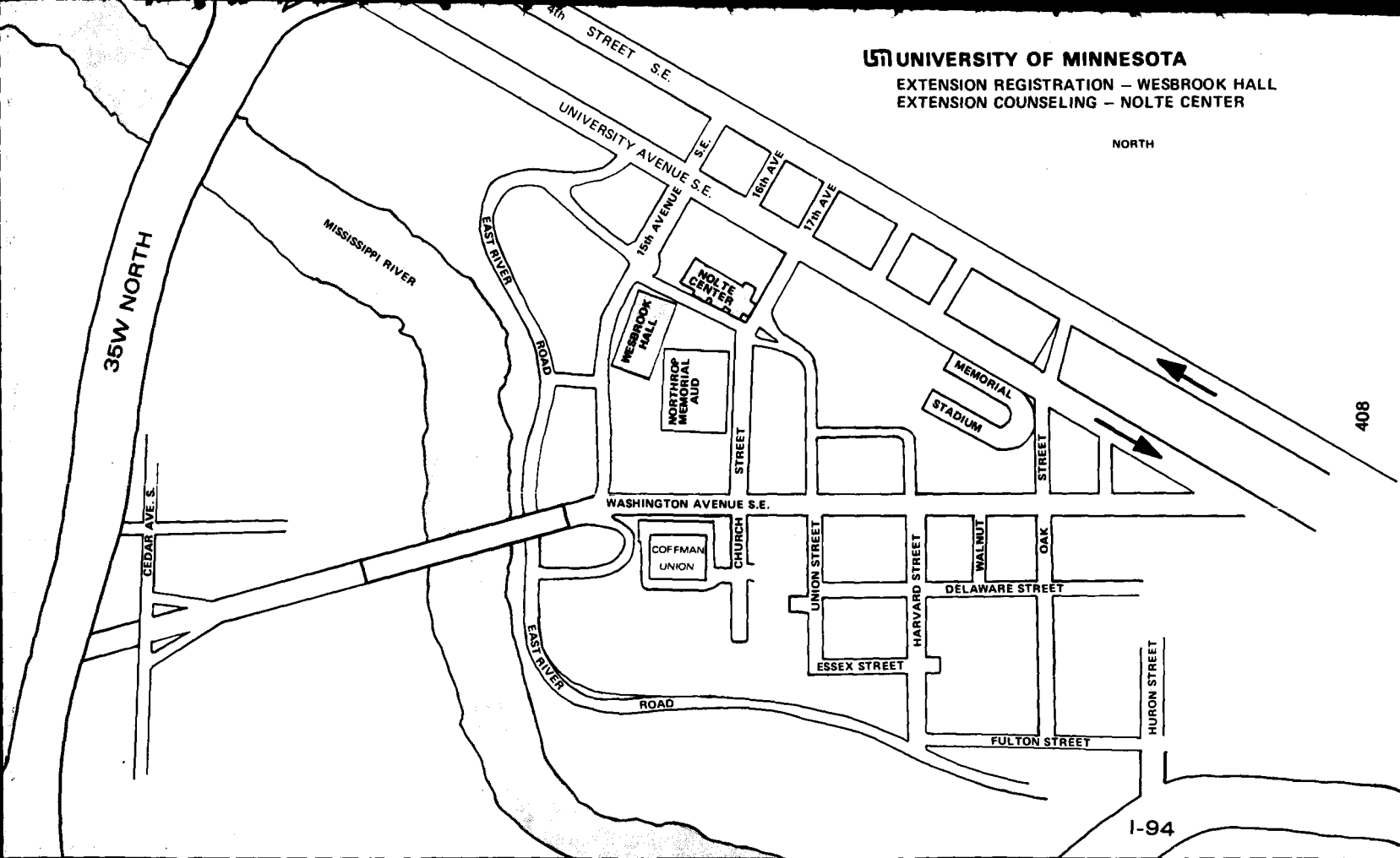


## EAST BANK CAMPUS

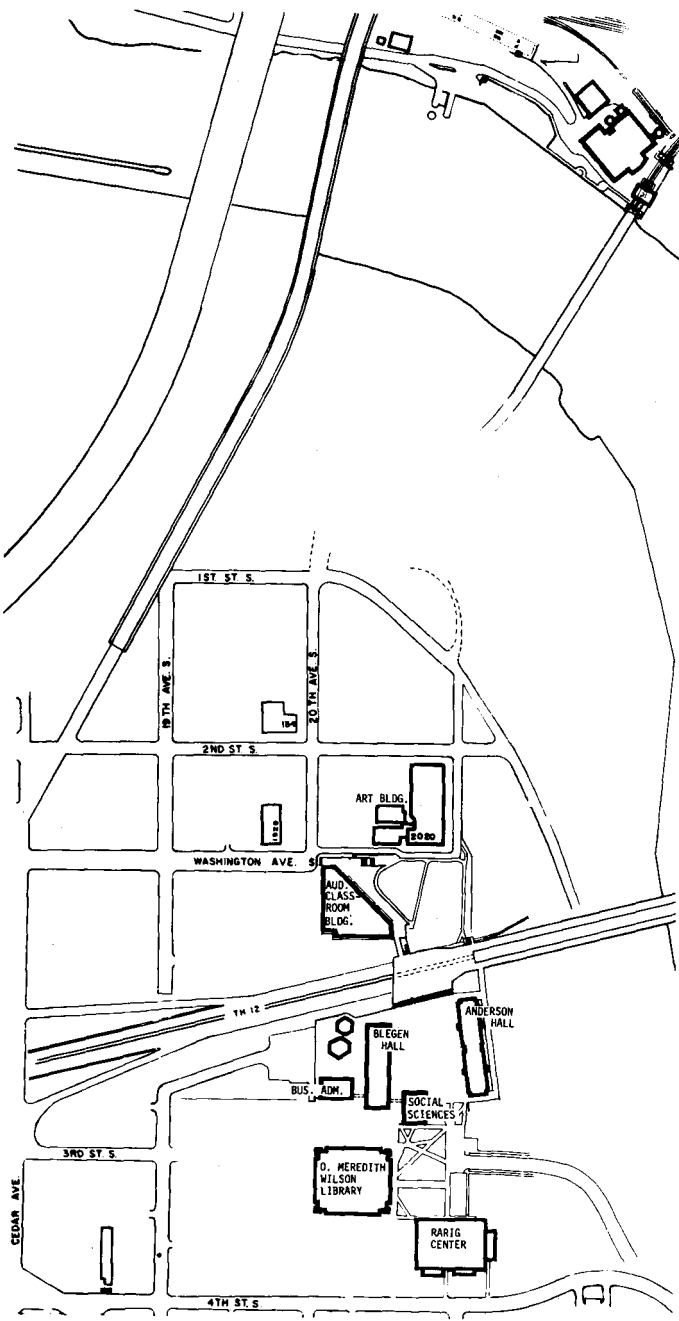
 UNIVERSITY OF MINNESOTA

EXTENSION REGISTRATION – WESBROOK HALL  
EXTENSION COUNSELING – NOLTE CENTER

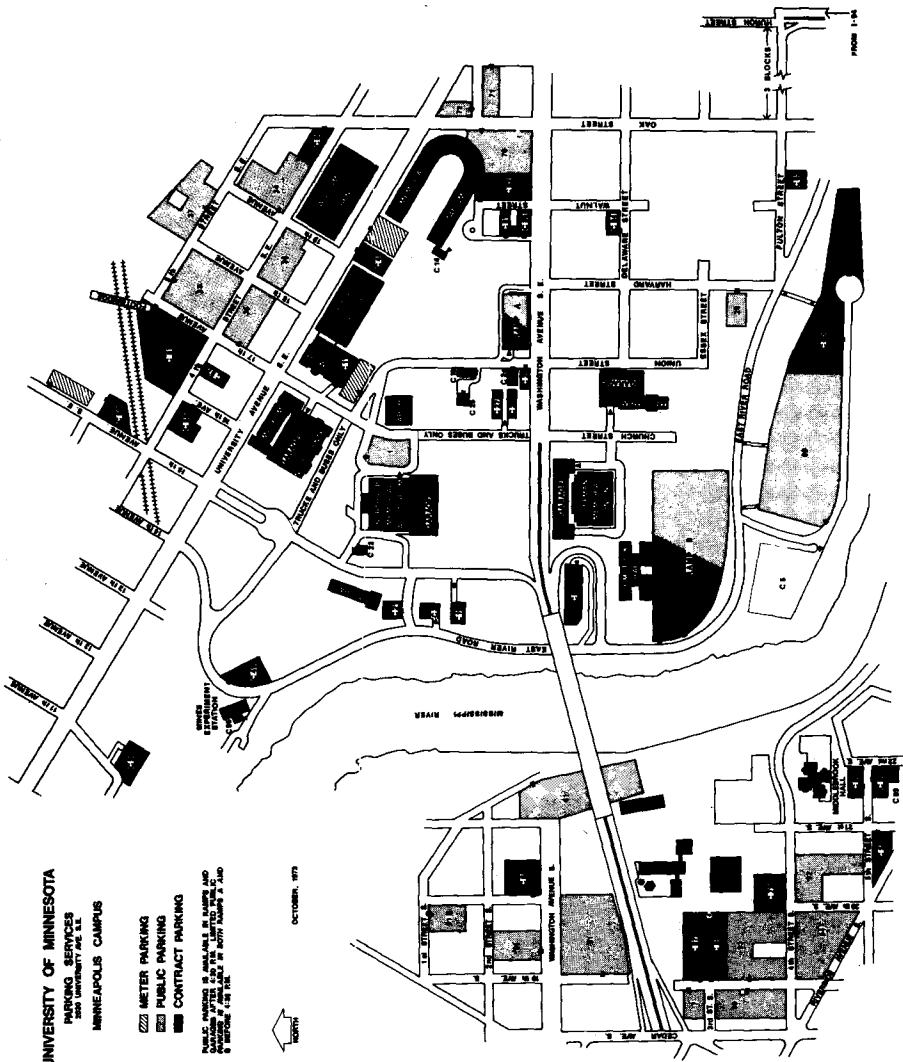
NORTH



408



**WEST BANK CAMPUS**



UNIVERSITY OF MINNESOTA  
 PARKING SERVICES  
 550 UNIVERSITY AVE. S.E.  
 MINNEAPOLIS CAMPUS

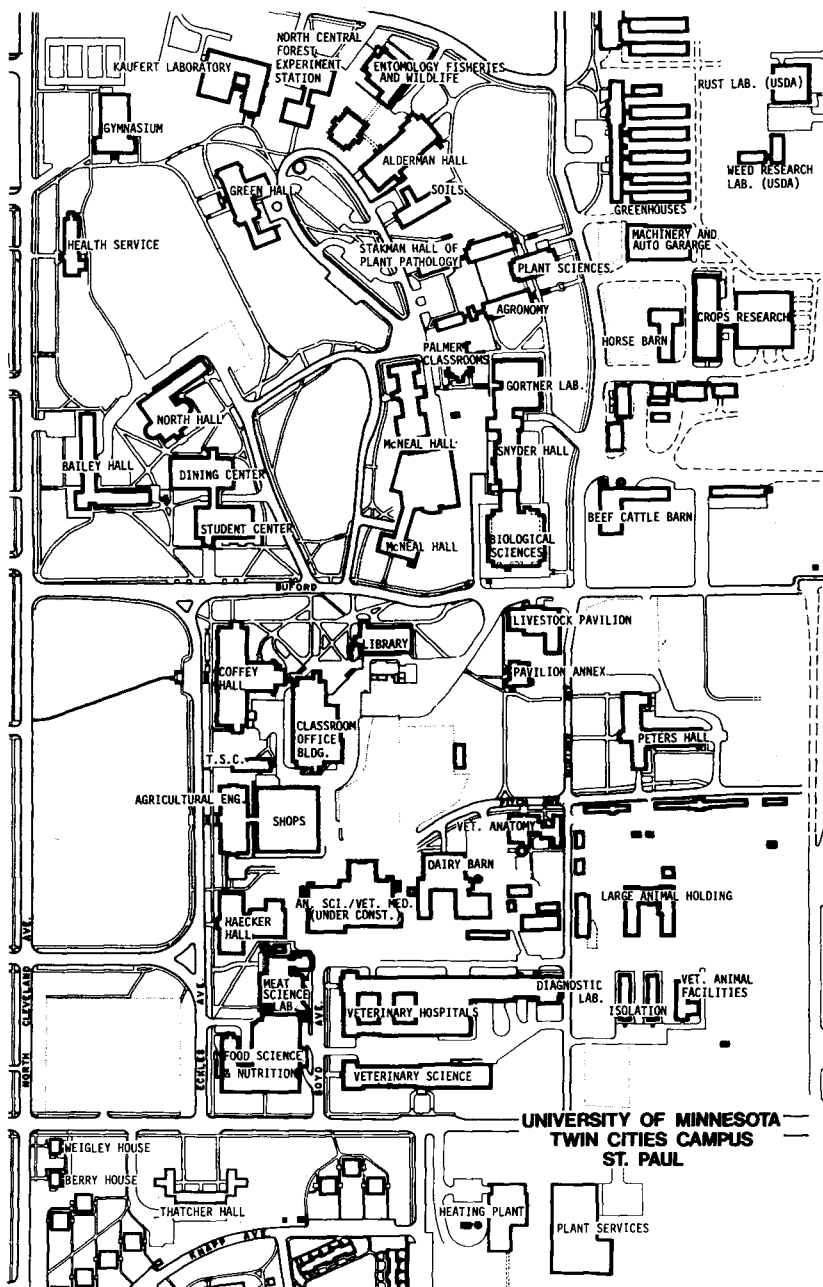
- ▨ METER PARKING
- ▨ PUBLIC PARKING
- ▨ CONTRACT PARKING

PUBLIC PARKING IS AVAILABLE IN PARKING LOTS OPERATED BY THE UNIVERSITY OF MINNESOTA. CONTRACT PARKING IS AVAILABLE IN THE CITY OF MINNEAPOLIS. SEE THE CITY OF MINNEAPOLIS OFFICE OF PUBLIC WORKS FOR MORE INFORMATION.

OCTOBER, 1973








## PARKING FACILITIES (East and West Bank)

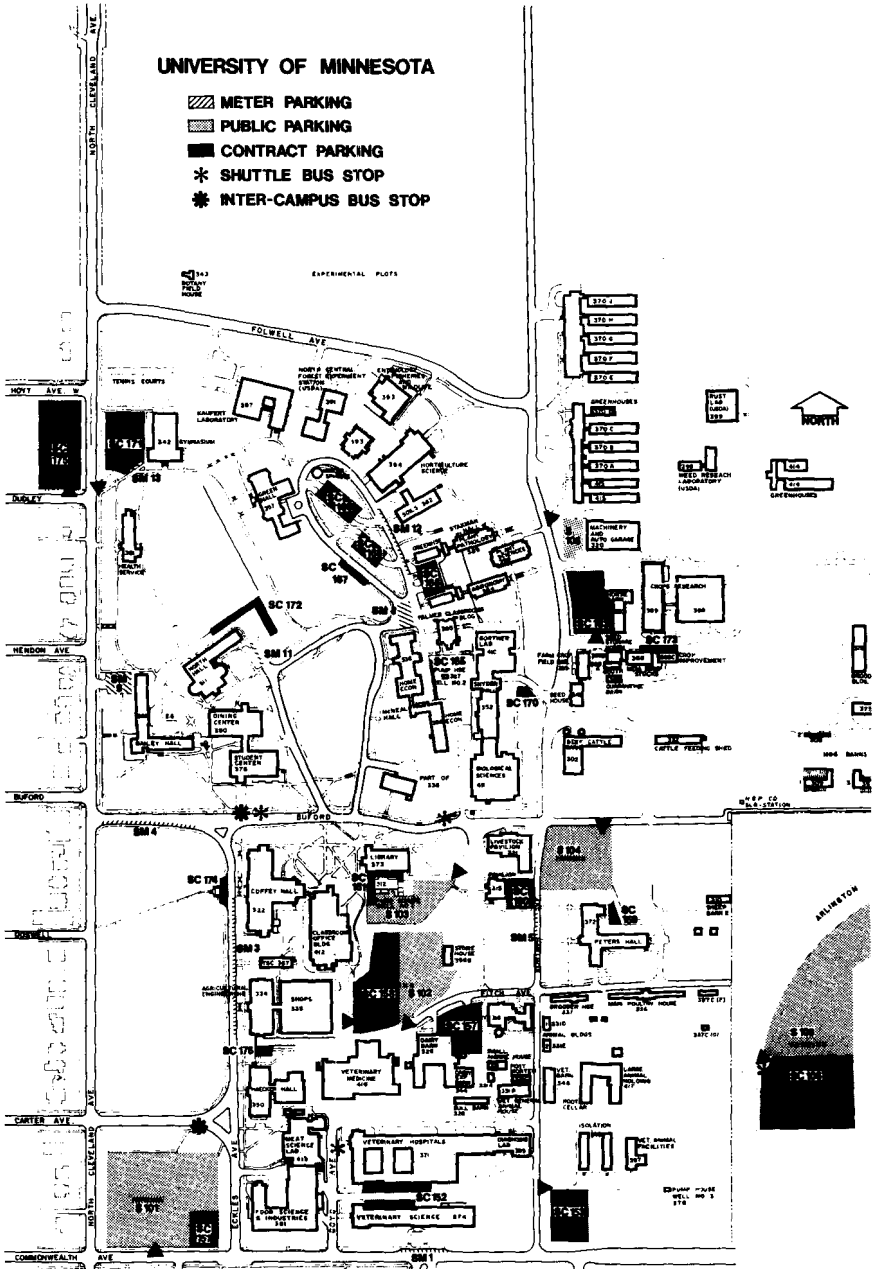


UNIVERSITY OF MINNESOTA  
TWIN CITIES CAMPUS  
ST. PAUL

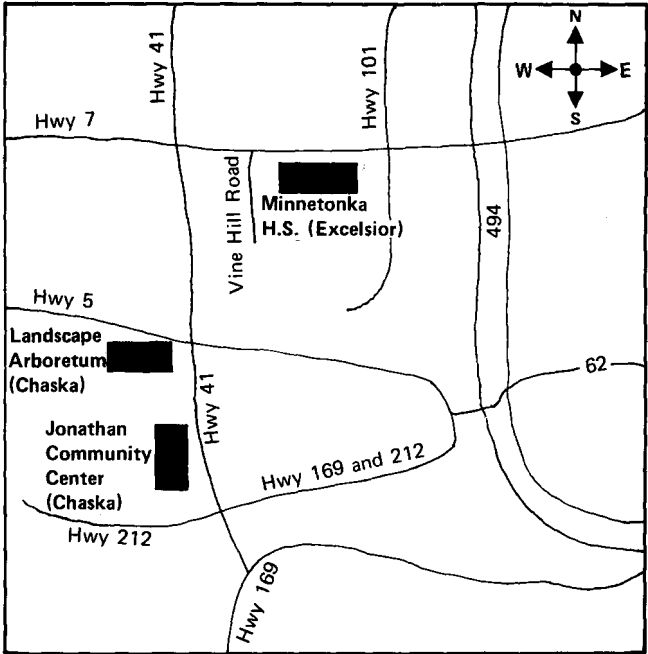
ST. PAUL CAMPUS MAP

UNIVERSITY OF MINNESOTA

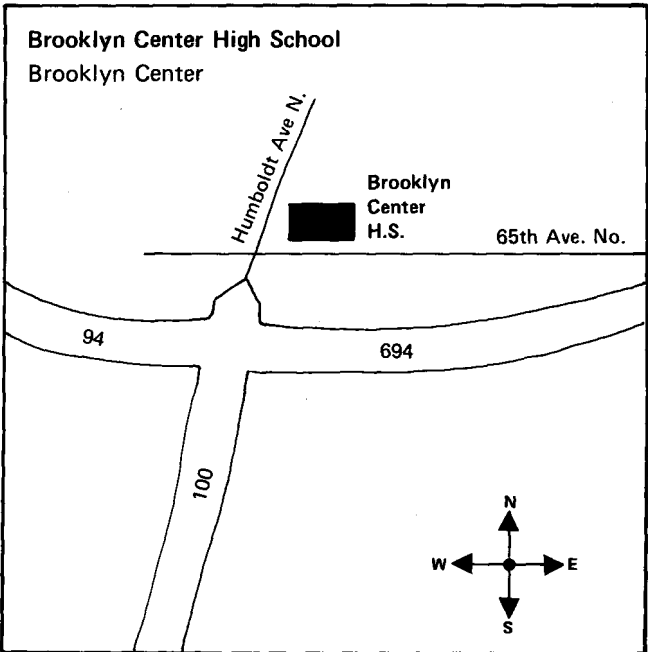
-  METER PARKING
-  PUBLIC PARKING
-  CONTRACT PARKING
-  SHUTTLE BUS STOP
-  INTER-CAMPUS BUS STOP



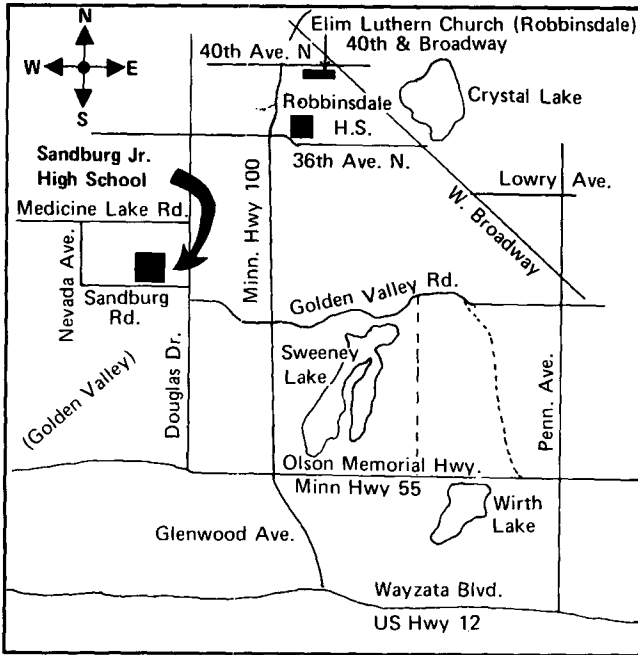
ST. PAUL CAMPUS PARKING



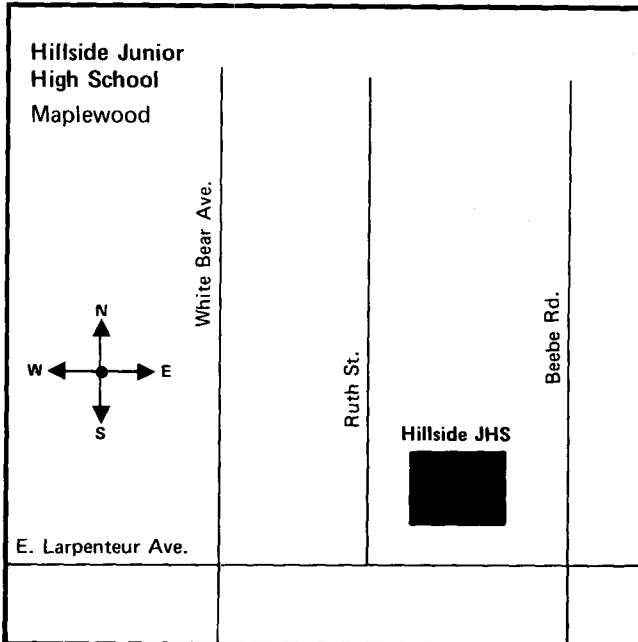
**Arboretum, Minnetonka High School**



**Brooklyn Center High School**

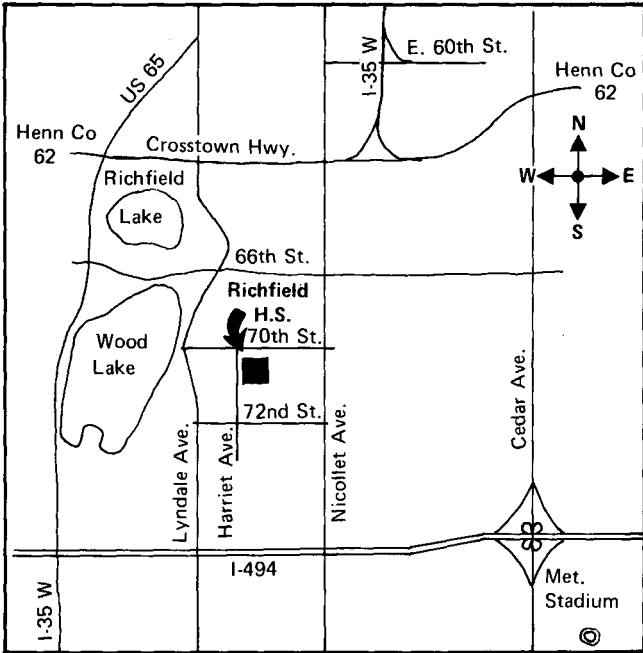


Elim Church, Sandburg Junior High

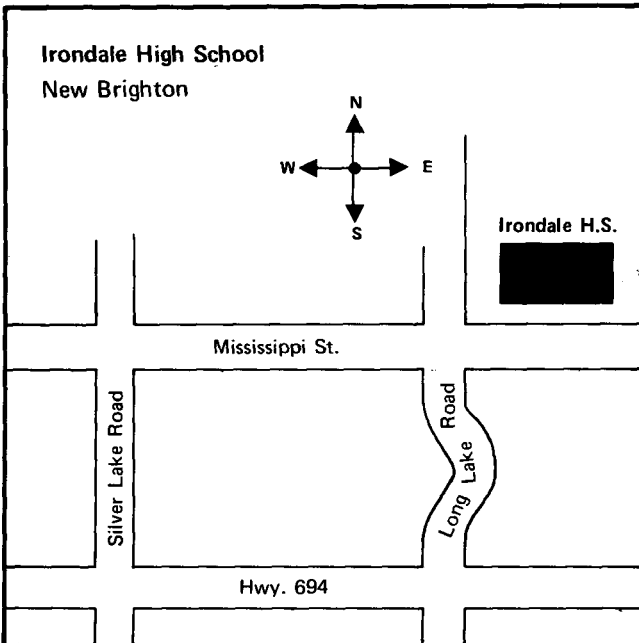


Hillside Junior High

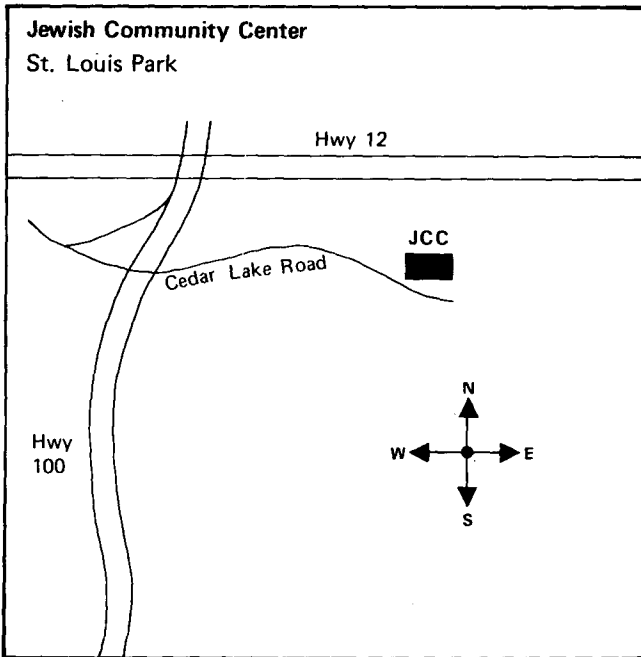




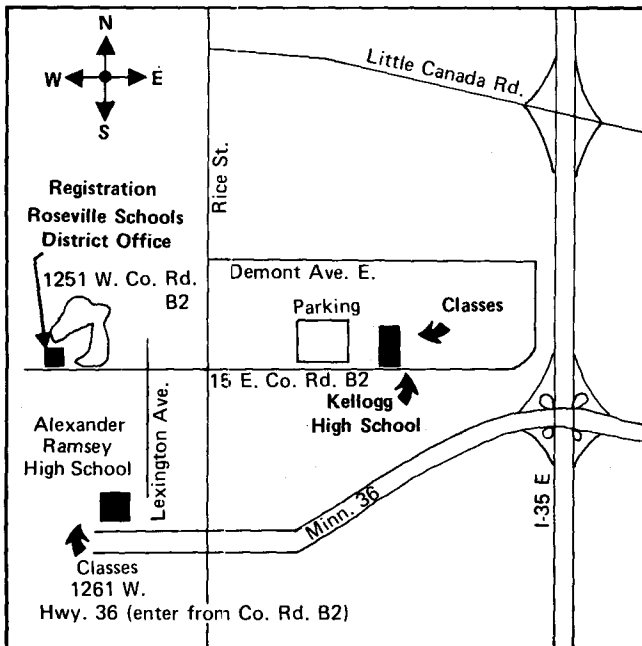
**Richfield High**



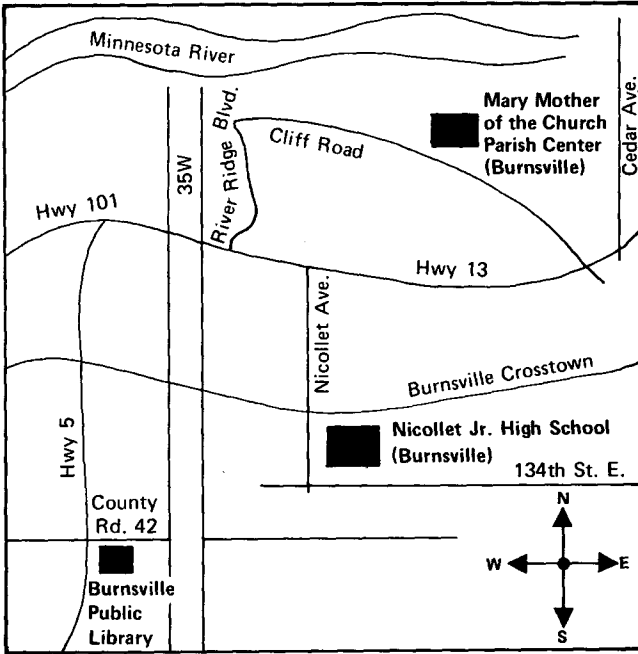
**Irondale High School**



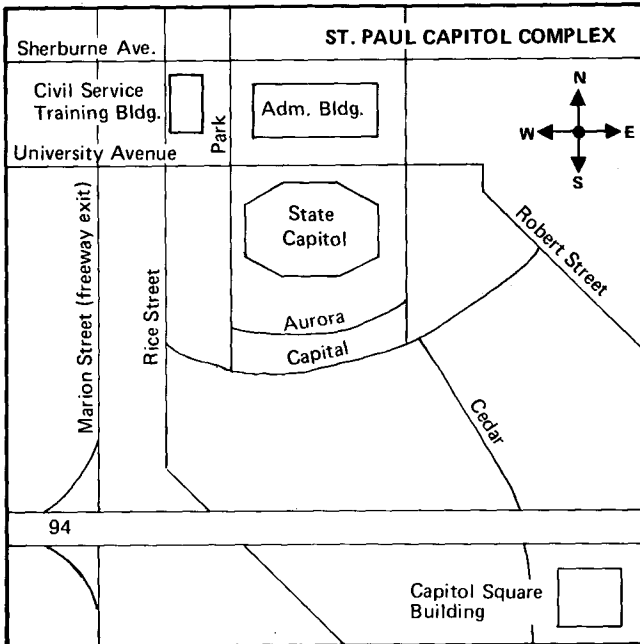
**Jewish Community Center**



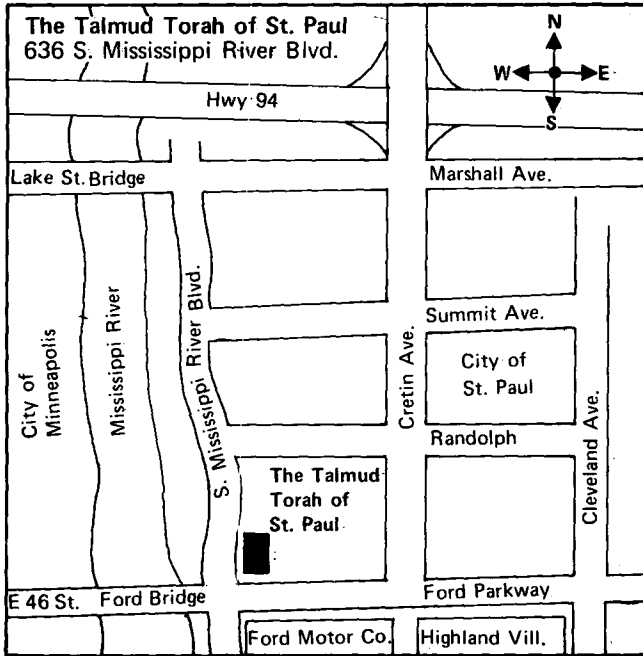
**Kellogg High School**



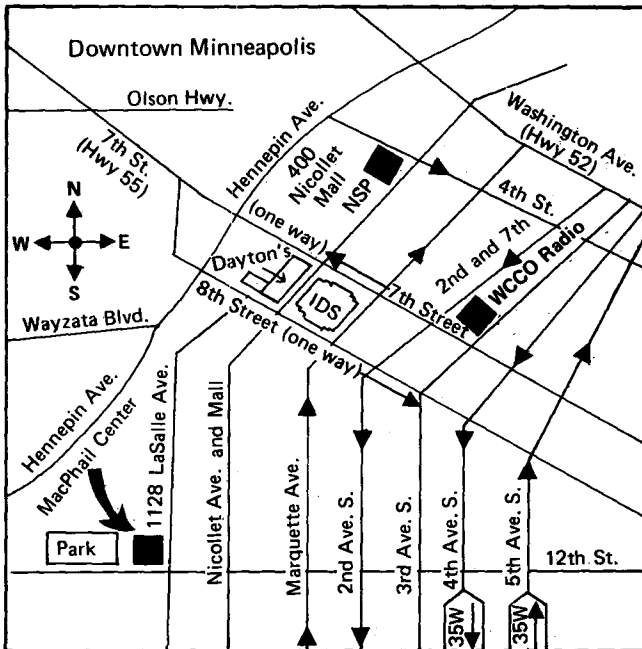
Nicollet Junior High



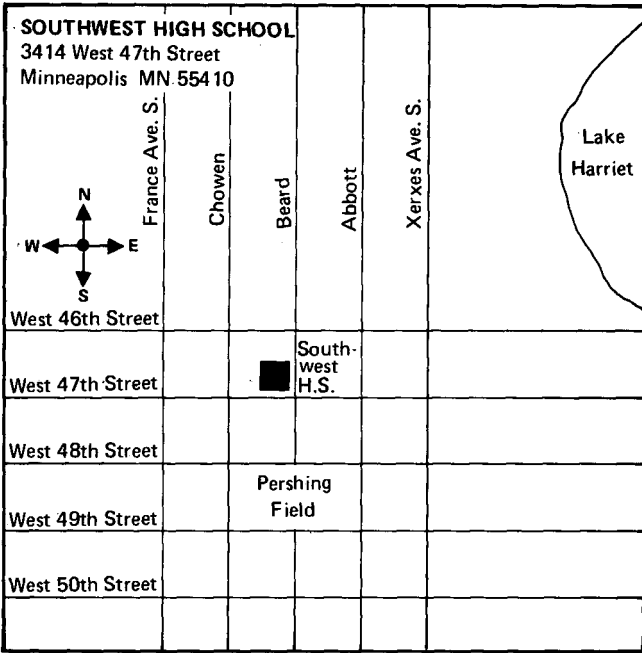
St. Paul Capitol Complex



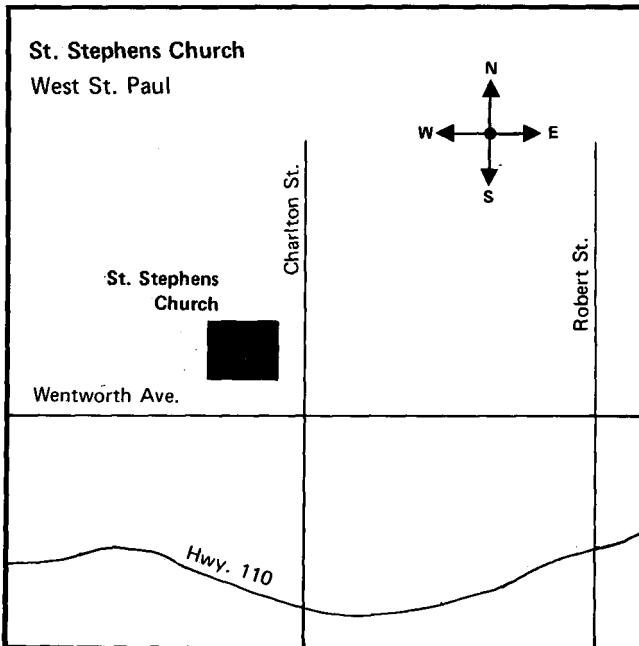
**Talmud Torah**



**WCCO Radio, MacPhail Center**



Southwest High School



St. Stephens Church



# neighborhood centers

## classes for neighborhood centers

The courses listed (by term) below will be held at off-campus, neighborhood centers in and around the Twin Cities area and on the St. Paul campus.

See the maps on pages 302-303.

See the course listings section of this **Bulletin** (arranged alphabetically by department) for course descriptions.

See page 403 for addresses and abbreviations of neighborhood centers.

See page 404 for departmental abbreviations.

See the "When and How to Register" section of this **Bulletin** for registration locations and dates.

Books for classes at neighborhood centers will be available both at campus bookstores and at B. Dalton bookstores at Rosedale and Eden Prairie Center shopping centers. For details, be sure to read the "**Bookstores**" section of this **Bulletin**.

There is no late registration fee for classes held at Cambridge High School or Buffalo Junior High School until Monday of the second week of classes (all terms).

**Disclaimer:** courses listed at the locations below were correct at the time material was submitted for publication. Check the course listings section for more complete and accurate information. However, courses may be deleted or added by Extension Classes during the academic year without notification. Read **INFO** for Bulletin changes.

**If you are registering for a limited class** (one whose course number and title are preceded by a ★ and printed in red ink in the course listings section of this **Bulletin**), be sure to read the registration information about limited classes on page 23 of this **Bulletin**.

The list below is not all inclusive; other courses in this **Bulletin** are held at these and other off-campus locations and at the MacPhail Center, downtown Minneapolis. They are described in the **course listings section**.

Some courses listed below may have prerequisite courses which must be satisfactorily completed before the listed course may be taken. Students are urged to check the course description before attempting to register for any course.

## minnesota landscape arboretum (chaska)

(Registration materials available at 101 Westbrook Hall, Minneapolis campus, or by mail—telephone 373-3195)

Symbols, abbreviations, off-campus class locations begin on page 401.

**Fall Quarter**

Hort 1001 Fundamentals of Horticulture

**Winter Quarter**

Hort 1010 Home Landscape Gardening and Design

**Spring Quarter**

Hort 1022 Plant Materials II

**brooklyn center high school**

(Registration materials available at 101 Wesbrook Hall, Minneapolis campus; at the Brooklyn Center High School community education office; or by mail—telephone 373-3195. Also see page 26)

**Fall Quarter**

FSoS 1025	Parenthood
GC 1235	The Law in Society
IR 0001C	Elements of Supervision

**Winter Quarter**

FSoS 1001	Dynamics of Dating, Courtship, and Marriage
GC 1471	Creative Problem Solving

**Spring Semester**

Comp 0004C	Business Correspondence
------------	-------------------------

**Spring Quarter**

IC 0001	Individual and Family Budget Planning
Psy 1003	Application of Psychology to Living
Rhet 1147	Efficient Reading

**buffalo junior high school**

(Registration materials available at the Community Education office, Buffalo Jr. High; or by mail—telephone 373-3195 in Minneapolis)

**Fall Quarter**

GC 1331	Instrumental Music and Its Traditions
GC 1534	Practical Law

**Winter Quarter**

GC 1511	Introduction to Modern Business
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**Spring Quarter**

GC 1285	Cultural Anthropology
Psy 1003	Application of Psychology to Living

Symbols, abbreviations, off-campus class locations begin on page 401.



## cambridge high school

(Registration materials available at the high school guidance office; or by mail—telephone 373-3195 in Minneapolis)

### Fall Quarter

Engl 3251	The King James Bible as Literature
GC 1471	Creative Problem Solving
GC 1551	Marketing: Retailing and Sales (tentative)

### Winter Quarter

GC 1552	Marketing: Sales Promotion (tentative)
IC 0039	Scandinavian Literature

### Spring Quarter

Soc 1002	American Community
----------	--------------------

## elim church (robbinsdale)

(Registration materials available at 101 Wesbrook Hall, Minneapolis campus; at Elim Church; or by mail—telephone 373-3195)

### Fall Quarter

GC 1357	Man's Religious Beliefs
GC 1540	Accounting Fundamentals
GC 1285	Cultural Anthropology

### Winter Quarter

Psy 1001	General Psychology
----------	--------------------

### Spring Quarter

GC 1721	Marriage and Family Living
---------	----------------------------

## hillside junior high school (maplewood)

(Registration materials available at the Community Education and Services Office, 2055 E. Larpenteur Ave., Maplewood; at 101 Wesbrook Hall on the Minneapolis campus; or by mail—telephone 373-3195)

### Fall Quarter

GC 1534	Practical Law
IC 0015	Current Issues in Nutrition: Fallacies and Facts.
Psy 1003	Application of Psychology to Living

### Winter Quarter

GC 1401	How to Expand Your Word Power
GC 1722	Parent-Child Relationships

### Spring Quarter

BLaw 3058	Business Law
GC 1721	Marriage and Family Living
Soc 1001	Introduction to Sociology

## **irondale high school (new brighton)**

(Registration materials available at the Community Education Department, 2959 N. Hamline Ave., St. Paul; at 101 Westbrook Hall on the Minneapolis campus; or by mail—telephone 373-3195)

### **Fall Quarter**

FSoS 1001	Dynamics of Dating, Courtship, and Marriage
GC 1282	Fields of Applied Psychology
Soc 5957	Sociology of Aging

### **Fall Semester**

Econ 1001	Principles of Economics
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### **Winter Quarter**

CPsy 1310/5310	Topics in Child Psychology
FSoS 1002	Dynamics of Marriage and Parenthood

### **Spring Semester**

Anth 1002	Introduction to Anthropology
Econ 1002	Principles of Economics
Math 0006	Elementary Algebra

### **Spring Quarter**

Spch 1101	Fundamentals of Speech-Communication
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## **jewish community center (st. louis park)**

(Registration materials available at 101 Westbrook Hall, Minneapolis campus; at the Jewish Community Center, 4330 S. Cedar Lake Rd.; or by mail—telephone 373-3195)

### **Fall Quarter**

IC 0018	Jewish Mysticism
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### **Spring Quarter**

ANEJ 1504/3504	Pagan Myths and the Bible
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## **kellogg high school (little canada)**

(For registration information, see page 26)

### **Fall Quarter**

Acct 3105	Intermediate Accounting
CPsy 3311/5311	Behavioral and Emotional Problems
Comp 1001	Introductory Composition
BFin 3000	Finance Fundamentals
IR 3002	Industrial Relations Systems: Labor Markets and the Management of Human Resources
Math 1201	Pre-Calculus
SpEd 5101	Education of Exceptional Children
SpEd 5112	Education of Learning-Disabled Children
Spch 1101	Fundamentals of Speech-Communication

Symbols, abbreviations, off-campus class locations begin on page 401.

### Fall Semester

Acct 1050	Principles of Accounting
BLaw 0001C	Common Legal Problems
Econ 1001	Principles of Economics
Econ 1002	Principles of Economics
Math 1111	College Algebra and Analytic Geometry
Psy 1001	General Psychology

### Winter Quarter

Acct 3106	Intermediate Accounting
BLaw 3058	Business Law
CPsy 1301	Introductory Child Psychology
CPsy 3347	Children's Learning and Intellectual Skills
Comp 1002	Introductory Composition
IR 0001C	Elements of Supervision
IR 3002	Industrial Relations Systems: Labor Markets and the Management of Human Resources
Ins 3100	Risk Management and Insurance
Math 1211	Analysis I
Psy 1003	Application of Psychology to Living
Rhet 1147	Efficient Reading

### Spring Semester

Acct 1050	Principles of Accounting
Acct 1051	Principles of Accounting
Econ 1001	Principles of Economics
Econ 1002	Principles of Economics
Math 1142	Introduction to Calculus of One and Several Variables

### Spring Quarter

Acct 3107	Intermediate Accounting
ArtS 1101	Basic Drawing
BFin 3000	Finance Fundamentals
Math 0009	Intermediate Algebra
Math 1221	Analysis II

## minnetonka high school

(For registration information, see page 26)

### Fall Quarter

Hist 1310	The Family in American History
Soc 1001	Introduction to Sociology
Mktg 3000	Principles of Marketing

### Fall Semester

Anth 1102	Introduction to Social and Cultural Anthropology
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### Winter Quarter

GC 1211	Man in Society: An Introduction to Social Science
Phil 1002	Introduction to Philosophy
Psy 1003	Application of Psychology to Living

(continued on next page)

### Spring Quarter

FSoS 1002	Dynamics of Marriage and Parenthood
GC 1534	Practical Law
IC 0005	Your Bright Child in School
Pol 1025	World Politics

## nicollet junior high school (burnsville)

(Registration materials available at the School District Office, 900 W. 128th St., Burnsville; at 101 Westbrook Hall on the Minneapolis campus; or by mail—telephone 373-3195)

### Fall Quarter

CPsy 1310/5310	Topics in Child Psychology
Comp 1001	Introductory Composition
GC 1211	Man in Society: An Introduction to Social Science

### Fall Semester

Econ 1001	Principles of Economics
Psy 1001	General Psychology

### Winter Quarter

Comp 1002	Introductory Composition
GC 1367	Contemporary Books and Periodicals

### Spring Semester

Econ 1002	Principles of Economics
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### Spring Quarter

Ast 1001	Solar System
GC 285	The Law in Society
Hum 1401	The Life of the Mind

## richfield senior high school

(For registration information, see page 26)

### Fall Quarter

Acct 3105	Intermediate Accounting
ArtS 1101	Basic Drawing
BLaw 3058	Business Law
CPsy 1301	Introductory Child Psychology
CPsy 5345	Language Development
Comm 1001	Communication
Hist 1301	American History
IR 3010	Human Relations and Applied Organization Theory
Math 0009	Intermediate Algebra
Math 1201	Pre-Calculus
Math 1211	Analysis I
Phil 1001	Logic
Hlth 5100	Driver Education I

Symbols, abbreviations, off-campus class locations begin on page 401.

**Fall Semester**

Acct 1050	Principles of Accounting
Anth 1002	Introduction to Anthropology
Econ 1001	Principles of Economics

**Winter Quarter**

Acct 3106	Intermediate Accounting
BLaw 3078	Business Law
Comm 1002	Communication
BFin 3000	Finance Fundamentals
FR 5402	Interpretation and Management of Forest Environments
Hist 1302	American History
IR 3007	Collective Bargaining Negotiations and Modern Labor Relations
Math 1211	Analysis I
Math 1221	Analysis II
Hlth 5101	Driver Education II
Soc 1001	Introduction to Sociology
SpEd 5112	Education of Learning-Disabled Children

**Spring Semester**

Acct 1050	Principles of Accounting
Acct 1051	Principles of Accounting
Econ 1002	Principles of Economics

**Spring Quarter**

Acct 3107	Intermediate Accounting
BLaw 3088	Business Law
CPsy 3303/5303	Adolescent Psychology
CPsy 3331/5331	Processes of Socialization of Children
CSPP 5110	Counseling Procedures
Math 1221	Analysis II
Math 1231	Analysis III
Psy 1003	Application of Psychology to Living
Hlth 5602	The Driver Simulator
Tran 3054	Fundamentals of Transportation

**st. paul capitol complex**

(Registration materials available at 101 Wesbrook Hall, Minneapolis campus; or by mail—telephone 373-3195)

**Fall Quarter**

BLaw 3058	Business Law
GC 1402	Vocabulary Development
Hist 3224	World War II
Soc 1001	Introduction to Sociology

(continued on next page)

Symbols, abbreviations, off-campus class locations begin on page 401.

**Fall Semester**

Acct 1050	Principles of Accounting
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**Winter Quarter**

Comp 1001	Introductory Composition
GC 1285	Cultural Anthropology
Hist 3225	World War II
Soc 5957	Sociology of Aging

**Spring Semester**

Acct 1051	Principles of Accounting
-----------	--------------------------

**Spring Quarter**

Comp 1002	Introductory Composition
GC 1454	Statistics
GC 3285	Anthropology of the City
Hist 3226	World War II
IR 0001C	Elements of Supervision

**sandburg junior high school (golden valley)**

(For registration information, see page 26)

**Fall Quarter**

Acct 5125	Auditing Principles and Procedures
AmSt 1101/3111	American Life
BLaw 3058	Business Law
Comp 1001	Introductory Composition
Hum 1001	Humanities in the Modern World I
Hum 1003	Humanities in the Modern World III
Mktg 3000	Principles of Marketing
Math 1221	Analysis II
PE 3111	Mechanics of Movement
Rhet 1147	Efficient Reading

**Fall Semester**

Acct 0130C	Income Tax Accounting
Acct 1050	Principles of Accounting
Acct 3220	Cost Accounting
Econ 1001	Principles of Economics
Econ 1002	Principles of Economics
Pol 1001	American Government and Politics

**Winter Quarter**

AmSt 1102/3112	American Life
ArtS 1101	Basic Drawing
Comp 1002	Introductory Composition
BFin 3000	Finance Fundamentals
IR 3010	Human Relations and Applied Organization Theory
Mktg 3000	Principles of Marketing
Math 0009	Intermediate Algebra
Math 1201	Pre-Calculus

### Spring Semester

Acct 1050	Principles of Accounting
Acct 1051	Principles of Accounting
Acct 5270	Reporting for Management Control
Econ 1001	Principles of Economics
Econ 1002	Principles of Economics
Psy 1001	General Psychology

### Spring Quarter

AmSt 1103/3113	American Life
BLaw 3058	Business Law
CPsy 1301	Introductory Child Psychology
CPsy 5343	Cognitive Development
FSoS 5025	Parenting
GC 1053	Selling Approaches and Techniques
Hist 1310	Urban History of the Twin Cities
Hum 1002	Humanities in The Modern World II
IR 3002	Industrial Relations Systems: Labor Markets and The Management of Human Resources
Math 1211	Analysis I
Soc 1001	Introduction to Sociology
SpEd 5101	Education of Exceptional Children

## the talmud torah of st. paul

(Registration materials available at 101 Wesbrook Hall, Minneapolis campus; at The Talmud Torah; at the United Jewish Fund, 700 Cleveland Ave. S., St. Paul; or by mail—telephone 373-3195)

### Fall Quarter

JwSt 3142	Themes in Medieval Jewish Thought
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### Winter Quarter

Soc 5151	Religion as a Social Institution
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### Spring Quarter

Clas 1049	Introduction to Biblical Archaeology
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## southwest high school (minneapolis)

(Registration materials available at the Community Education Office, Southwest High School; at 101 Wesbrook Hall on the Minneapolis campus; or by mail—telephone 373-3195)

### Fall Quarter

Psy 1003	Application of Psychology to Living
Soc 1002	American Community

### Winter Quarter

BLaw 3058	Business Law
GC 1471	Creative Problem Solving
Pol 1027	Urban Politics

(continued on next page)

**Spring Quarter**

FSoS 1025  
 IR 3010  
 Phil 1011

Parenthood  
 Human Relations and Applied Organization Theory  
 Science and Religion

## **wcco radio building (downtown minneapolis), room 512**

(Registration materials available at 101 Wesbrook Hall, Minneapolis campus; or by mail—telephone 373-3195)

**Fall Quarter**

Ins 3100  
 MIS 5100  
 QA 1050

Risk Management and Insurance  
 Introduction to Computers and Computer Data Processing  
 Elementary Managerial Statistics

**Winter Quarter**

BLaw 3058  
 MIS 5101  
 QA 3055  
 Soc 3601

Business Law  
 Introduction to Management Information Systems  
 Introduction to Management Sciences  
 Urban Community

**Spring Quarter**

IR 3002  
  
 MIS 5101  
 QA 1050

Industrial Relations Systems: Labor Markets and the  
 Management of Human Resources  
 Introduction to Management Information Systems  
 Elementary Managerial Statistics

## **st. stephens church (west st. paul)**

(Registration materials available at 101 Wesbrook Hall, Minneapolis campus; at St. Stephens Church; or by mail—telephone 373-3195)

**Fall Quarter**

FSoS 1002  
 GC 1421  
 IC 0001

Dynamics of Marriage and Parenthood  
 Writing Laboratory: Personal Writing  
 Individual and Family Budget Planning

**Winter Quarter**

IC 0024  
 Phil 1003

The Artist's Hat  
 Ethics

**Spring Quarter**

GC 1367  
 GC 1461

Contemporary Books and Periodicals  
 Oral Communication: Basic Principles

Symbols, abbreviations, off-campus class locations begin on page 401.



## st. paul campus class offerings

The following courses will be offered this year on the St. Paul campus of the University of Minnesota. See the course listings section of this Bulletin (arranged alphabetically by department) for course descriptions.

Buy books for classes offered on the St. Paul campus at the Coffey Hall bookstore. See the "How and When to Register" section of this Bulletin.

### Fall Quarter

Dsgn 1523	Drawing and Design I
Dsgn 1525	Two-Dimensional Design I
Dsgn 1533/3533	Metalsmithing: Introduction to Techniques
EdAd 5128	Workshop: Educational Administration
EdAd 8201	Formal Organizations in Education
FSoS 5200	Family Relationship
FSoS 5219	Problems in Family Financial Management
FScN 1500	Meat Science
FScN 1603	Family Nutrition
FScN 3110	Food Chemistry
FScN 3762	Hospitality Financial Management
FScN 5380	Food Packaging
Hort 1010	Home Landscape Gardening and Design
Hort 1011	Horticultural Crop Evaluation
Hort 3077	Floral Design
PIPa 5702	Principles of Plant Disease Control
Soil 3122/5022	Introductory Soil Science
TexC 5622	Issues, Trends in Textile-Consumer Problems
YoSt 5131	Program and Services for Youth
YoSt 5132	Action Learning for Youth

### Fall Semester

AgEc 1400	Agricultural Markets and Prices
ArtS 0001C	Color Photography I
Dsgn 1450	Drafting—Basic Drafting Techniques
Dsgn 1455	Interior Design I
Dsgn 1521	Use of Color
Dsgn 1532	Structure—Fabric Design I
Dsgn 3450	Perspective and Presentation Sketches
Dsgn 3451	Interior Design Rendering
Dsgn 3455	Seminar in Interior Design
Dsgn 3459	Interior Design Business
Econ 1001	Principles of Economics
TexC 5603	Experimental Studies in Clothing Construction

### Winter Quarter

Dsgn 1533/3533	Metalsmithing: Introduction to Techniques
Dsgn 3415	20th Century Interiors and Furnishings
Dsgn 5565	Homes of the World
FScN 1030	Understanding Cheese
FScN 3123	Microbiology of Foods
FScN 3642	Community Nutrition
FScN 5312	Chemical and Instrumental Analysis of Foods
FScN 5750	Selected Aspects of Food Service and Hospitality Business Management
FScN 8120	Food Process Microbiology
Hort 1036	Plant Propagation
Hort 3026	Residential Landscape Design

(continued on next page)

Hort 3031  
Hort 3076  
PE 1056  
PIPa 1002/5003  
Soil 0100C  
SpEd 5105

VM 1100

#### Spring Semester

AgEc 5480  
ArtS 0001C  
ArtS 0002C  
Dsgn 1450  
Dsgn 1521  
Dsgn 3450  
Dsgn 3451  
Dsgn 3456  
Econ 1002  
ForP 5405  
TexC 3643

Fruit Science  
Arboriculture  
Nordic, Cross Country Skiing  
Introductory Plant Pathology—Pathogens  
Garden Soil Management  
Implementing Court Decisions on Education of  
the Handicapped  
Care, Management, Showing, and Diseases of Horses

Commodity Markets and Futures Training  
Color Photography I  
Color Photography II  
Drafting—Basic Drafting Techniques  
Use of Color  
Perspective and Presentation Sketches  
Interior Design Rendering  
Seminar in Interior Design  
Principles of Economics  
Paper in Today's World  
Fashion Merchandising

#### Spring Quarter

Biol 1103  
Dsgn 1531  
Dsgn 3536  
Dsgn 5561  
EdAd 5128  
EdAd 8218  
FSoS 5240  
FScN 1215  
FScN 1600  
FScN 5512  
FScN 5740  
ForP 5403  
GCB 3022  
Hort 1001  
Hort 1021  
Hort 3032  
Hort 5020  
PIPa 1003/5004  
  
Rhet 5257  
YoSt 5132

General Botany  
Surface—Fabric Design  
Metalsmithing: Enameling  
Housing Management  
Workshop: Educational Administration  
Seminar: the Social Organization of Schools  
Special Topic: Developmental Stage Theory  
Home Preservation of Foods  
Sociocultural Aspects of Nutrition  
Meat and Protein Technology  
Design and Layout of Food Services  
Wood and Wood Products  
Genetics  
Fundamentals of Horticulture  
Plant Materials I  
Vegetable Science  
Horticultural Techniques for Education Majors  
Introductory Plant Pathology—  
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Action Learning for Youth

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# Register by MAIL

We want to help you register for Extension Classes in the easiest manner possible. The simplest is by mail. Please refer to **how to register by mail, page 23.**

This is a request card not a registration card. Its purpose is to request to have registration materials mailed to you.

Registration can be made only for the current term. Request the number and kinds of registration forms by filling in completely and mailing the card below. Do not enclose check with this card.

## Request postcard



PLEASE DETACH AND MAIL . . .

441

Please send me \_\_\_\_\_ registration forms

PLEASE PRINT

Name

Street Address

City

State

Zip Code

- Please send G.I. Bill form  
 Please send Athletic Facilities Forms  
 Please send Health Service Forms

OFFICE USE ONLY


TELEPHONE:

HOME

BUSINESS

EXTENSION

**Don't waste your time waiting  
in long registration lines...**

# **REGISTER BY MAIL**



**Use the request postcard below**

442

AFFIX  
POSTAGE  
HERE

**DEPARTMENT OF EXTENSION CLASSES  
UNIVERSITY OF MINNESOTA  
101 WESBROOK HALL  
MINNEAPOLIS, MINNESOTA 55455**

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443

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Name

Street Address

City

State

Zip Code

TELEPHONE:

HOME

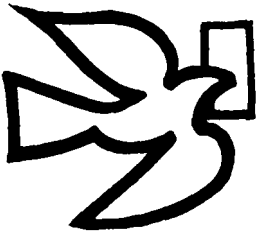
BUSINESS

- Please send G.I. Bill form
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EXTENSION

**Save gas and human energy...**

**REGISTER BY MAIL**



**Use the request postcard below**

444

AFFIX  
POSTAGE  
HERE

**DEPARTMENT OF EXTENSION CLASSES  
UNIVERSITY OF MINNESOTA  
101 WESBROOK HALL  
MINNEAPOLIS, MINNESOTA 55455**

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PLEASE DETACH AND MAIL . . .

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OFFICE USE ONLY


PLEASE PRINT

Name

Street Address

City

State

Zip Code

TELEPHONE:

HOME

BUSINESS

- Please send G.I. Bill form
- Please send Athletic Facilities Forms
- Please send Health Service Forms

EXTENSION

**The easiest way to register  
in nonlimited classes . . . .**

**is to REGISTER BY MAIL**



**9c**

**Use the request postcard below**

446

AFFIX  
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University of Minnesota Bulletin

**Extension  
Independent  
Study**  
1976-77

July 1, 1976  
Continuing Education  
and Extension  
University of Minnesota



## Diversified Independent Study

This bulletin contains information on a variety of Independent Study methods available through Continuing Education and Extension at the University of Minnesota. These methods include correspondence study, broadcast television credit courses, radio credit courses, video cassette credit courses, and audio cassette credit courses. They are designed to meet the need for flexibility of Independent Study students. Please use the Table of Contents and the Index to find those methods of study and courses that are particularly interesting to you.

## Bulletin Artwork

The theme of this year's bulletin is Minnesota art. The cover art is a reproduction of "Wild Rice" by Esther Remington. Mrs. Remington presented this painting as a gift to Continuing Education and Extension in memory of her husband, Professor Gilford A. Remington. The painting now hangs in the Office of the Dean, 150 Westbrook Hall. Mr. Remington served as Director of Evening Classes for the General Extension Division (now called CEE) in Duluth. CEE was also given a scholarship by Mrs. Remington in memory of her husband.

Esther Remington holds a B.A. with a major in Art, and in 1960 she was the first person to receive a Master's degree in Art Education at the University of Minnesota, Duluth. She has studied not only with the Art faculty at UMD, but with internationally known painters Philip Evergood, Dong Kingman, Fletcher Martin, Will Barnet, and Ralston Crawford.

Mrs. Remington, who lived in India with her husband when he was an attache and Regional Films Officer at the American Embassy in New Delhi, has traveled widely in Europe and Asia and has lectured on many aspects of art and the Orient.

She is a member of the Executive Board of the Duluth Art Institute. In 1962 she held an assignment as Lecturer in Art, Department of Art, UMD. She has taught several years at the Duluth Art Institute and was Art Consultant for the International Institute festival in 1962 and 1963. She has had numerous one-woman shows and has won many awards for her art.

### UNIVERSITY OF MINNESOTA BULLETIN

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The contents of this bulletin and other University bulletins, publications, or announcements are subject to change without notice.

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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

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 to be a governing principle in University-owned and University-approved housing, in food services, student unions, extracurricular activities, and all other 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.

The University of Minnesota abides by the provisions of Title IX, federal legislation forbidding discrimination on the basis of sex, and abides by all other federal and state laws regarding equal opportunity.



"Chippewa Mourners"  
Oil-painting by Cameron Booth  
1923

Scene on Chippewa Reservation at Onigum, MN  
Reproduced by permission, Minnesota Historical Society



"Swede Hollow Area"

Etching by George Resler

ca. 1920

Reproduced by permission, Minnesota Historical Society

## **How To Register For Independent Study**

Read carefully the General Information section of this bulletin. You are responsible for all rules and information contained there; it is to your advantage to read and understand it before enrolling.

Choose the course or courses for which you wish to register, and complete the registration form at the center of this bulletin. If you plan to apply credits earned through Independent Study toward a degree or certificate program, check with your advisor, a college counselor, or the Extension Counseling Office, 314 Nolte Center, before registering, regarding the applicability of Independent Study credits to your program.

Send or bring in the completed registration form with full or partial payment, including any special fees, 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.

When you register, you will receive lesson forms, labels, a book order form, 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 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.

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; telephone (612) 373-3256.

## Course Descriptions and Numbering

Courses are listed under departmental or subject headings, alphabetically arranged. Where other classifications are possible, cross references are given. Refer to the index also.

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. The sample course description below indicates the information that may be found in all course descriptions in this bulletin. Additional course information can be obtained by writing to the Department of Independent Study for an introduction to the course study guide. Use the form included at the end of this bulletin.

1            2            3  
**Engl 5261 MILTON (3692)**  
9 lessons — \$68 — 4 degree credits — text price \$11-13 — McNaron  
4            5            6            7            8

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) 9

1. Department designation and course number.
2. Course title
3. Department of Independent Study reference number (for office use only)
4. Number of lesson assignments to be evaluated (excluding exams)
5. Tuition cost
6. Number and kind of credits offered (i.e., degree or certificate)
7. Approximate price of texts and materials
8. Instructor's last name (see Faculty list for title)
9. Course content and prerequisites, if any

The University of Minnesota uses the following course numbering system

0001 to 0998	Noncredit or certificate courses; certificate credit course numbers are followed by a "C"
1000 to 1998	Lower division courses primarily for freshmen and sophomores
3000 to 3998	Upper division courses primarily for juniors and seniors; also open to other students with at least a C average and necessary prerequisites
5000 to 5998	Graduate level courses for juniors, seniors, and graduate students (Credits earned through Independent Study are not accepted as graduate credit in the University of Minnesota Graduate School).

# Course Descriptions

## Accounting

### **Acct 1024 PRINCIPLES OF ACCOUNTING I (1524)**

16 lessons — \$46.50 — 3 degree credits — text price \$17-19 — Lund  
Recording, reporting, and interpreting business events. Use of accounting as a tool of business management. Topics: financial statements; journal, ledger, and trial balance; adjusting process; receivables, payables, and interest; merchandise inventory; plant assets and intangibles.

### **Acct 1025 PRINCIPLES OF ACCOUNTING II (1525)**

16 lessons — \$46.50 — 3 degree credits — text price \$21-23 — Lund  
Continuation of Acct 1024. Topics: control over cash; bank reconciliation; petty cash; voucher system, payroll records; partnership accounting; corporation accounting; manufacturing statements; process cost systems; job order cost systems; fund statement; cash-flow statement and financial statement analysis. (Prerequisite: Acct 1024 or introductory college accounting course)

### **Acct 1026 PRINCIPLES OF ACCOUNTING III (1526)**

16 lessons — \$46.50 — 3 degree credits — text price \$13-15 — Lund  
Use of accounting data in making managerial decisions. Topics: job order cost systems, manufacturing overhead variance; process cost accounting; standard cost accounting; variable costing; cost-volume-profit relationships; budget-sales-production relationships; financial planning; managerial decision making; capital investment decision making and price decision making. (Prerequisite: Acct 1025 or equivalent)

### **Acct 5135 INCOME TAX ACCOUNTING (1586)**

16 lessons — \$68 — 4 degree credits — text price \$18-20 — Lassila  
The more common and important provisions of the federal income tax system as applied to individuals and corporations. Begins with a consideration of which types of income are taxable and which are not. Consideration is then given to gains and losses, dividends, and deductions. (Prerequisite: Acct 1025 or Acct 1050 or equivalent)

## Adolescent Psychology

See Child Psychology

## Aerospace Engineering and Mechanics

### **AEM 3016 DEFORMABLE BODY MECHANICS (3237)**

11 lessons — \$62 — 4 degree credits — text price \$17-19 — Moran  
The determination of forces and moments on and within structures in static equilibrium. The concepts of stress and strain. Relations between stress and strain for elastic and other

## Course Descriptions

materials. Analysis of beam-like structures under axial, torsional, or transverse loading. An unusual grading system will be employed; to get a C, students need only pass short-answer quizzes on each lesson. Performance in problem solving, as evidenced in three more difficult exams, determines who gets A's and B's. (Prerequisite: Calculus through integration and partial derivatives)

## Agricultural Economics

### AgEc 1400 AGRICULTURAL MARKETS AND PRICES (1081)

15 lessons — \$62 — 4 degree credits — text price \$14-16 — Dahl and Hammond  
Agricultural markets and marketing systems; food consumption and demand; agricultural production and supply; market prices; marketing margins; markets over space and time; quality differences and grades for farm products; market information; market structure analysis; marketing and pricing institutions; market and price policy; and marketing pricing and economic development. **This course is now in preparation; please inquire before enrolling.**

### AgEc 3800 FARM RECORDS AND BUSINESS ANALYSIS (1080)

16 lessons — \$46.50 — 3 degree credits — text price \$13-15 — Persons  
Forms and procedures for recording inventories, cash receipts and expenses, crop acreages and yields, feed consumed by livestock, and other information concerning the farm business. Calculation of measures of farm earnings and factors affecting earnings.

## Agriculture

Please see the following departmental listings for course offerings:

Agricultural Economics

Animal Science

Entomology

Food Science and Nutrition

Horticultural Science

## American Indian Studies

### Amln 1101 AMERICAN INDIAN HISTORY: A SURVEY (4730)

12 lessons — \$62 — 4 degree credits — text price \$8-10 — Voights  
Indians in North America prior to white contact; Indian-white relations; development of federal Indian policy; persistence and change in American Indian cultures.

## American Studies

### AmSt 1101 INDIVIDUALISM IN AMERICAN LIFE (1401)

13 lessons — \$62 — 4 degree credits — text price \$21-23 — Stuart  
The core of American Studies 1101 is the study of individualism in America. Individualism, in the minds of some, is our most admirable national trait; in the minds of others, it is our most notorious. To acquire a critical understanding of this crucial issue in American culture, students will work with poetry, essays, fiction, historical documents, music, art, architecture, and the writings of both laymen and experts in economics, politics, sociology, and philosophy. In addition to providing ways of understanding individualism, the course is designed to introduce students to the use of materials from several disciplines as they relate to and illuminate a particular aspect of American culture.

### AmSt 1102 RELIGION IN AMERICAN LIFE (1402)

14 lessons — \$62 — 4 degree credits — text price \$20-22 — Stuart  
The most immediate aim of the course is to introduce the student to the study of religion in American thought and experience. To this end, materials from several disciplines will provide

multiple perspectives on certain major currents in American belief systems which seem to have been particularly important in the development of American culture as a whole. The course's interdisciplinary approach will continuously allow students to raise questions about the interrelationships between these belief systems and developments in politics, economics, science, art, music, and literature.

## Animal Science

### AnSc 1600 HORSE PRODUCTION (1041)

12 lessons — \$62 — 4 degree credits — text price \$13-15 — 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 — \$77.50 — 5 degree credits — text price \$34-36 — 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 — \$77.50 — 5 degree credits — text price \$16-28 — Cohen  
Focuses on the traditional culture of the Indians of North and Middle America. A survey of native life-ways in different regions. Opportunities for student-selected in-depth study of specific cultures are also provided. Primary emphasis is on the Indian cultures prior to extensive contacts with Europeans, but some attention is also directed toward the history of Indian-white contact and toward the contemporary Indian living on reservations or in cities. (Prerequisite: Anth 1002)

### Anth 5141 CULTURE AND PERSONALITY (1196)

16 lessons — \$85 — 5 degree credits — text price \$22-24 — Cohen  
Role of culture in formation of personality. Cross-cultural patterns of childrearing. Problems of individual adjustments to demands of culture. Psychological approach to culture. (Prerequisite: Anth 1002)

## Art History

### ArH 1015 ART IN WESTERN CIVILIZATION (1205)

13 lessons — \$62 — 4 degree credits — text price \$16-18 — Waldfoegel  
A concise history of Western art and culture, the course is based on Lord Clark's **Civilisation**, first shown by the British Broadcasting Corporation in the late sixties. The content of the thirteen films is provided verbatim in a text prepared by Lord Clark himself. It is profusely illustrated (partly in color), as is a second book employed in the course because of its excellence in establishing the historical setting of the art discussed by Lord Clark.

### GC 1048 BASIC CRAFT SKILLS (1247)

11 lessons — \$62 — 4 degree credits — text price \$11-13 — Nelson and Strother  
A beginning course that explores the components of crafts. No kits; no "how-to-do-it-in-10-steps-or-less"; none of that. Instead, the course will teach you how to deal with the larger concept of crafts — design, motivation, media, and color. This concept will allow you to develop a new attitude toward a self-exploration of craft ideas. Some of the media introduced are fibers, clay, fabrics, paper, printing, clay, and found objects. **This course is now in preparation; please inquire before enrolling.**

## Course Descriptions

### Astronomy

#### GC 1161 PHYSICAL SCIENCE: SOLAR ASTRONOMY (1312)

16 lessons — \$77.50 — 5 degree credits — text price \$16-18 — Policoff

An introductory survey of the solar system, including a study of the earth, planets, satellites, asteroids, comets, and meteorites. Topics include the celestial sphere, coordinate systems, time intervals, motions and physical attributes of planets in the solar system, and instruments used by the astronomer. Observations of the night sky will be required.

#### GC-1162 PHYSICAL SCIENCE: STELLAR ASTRONOMY (1313)

15 lessons — \$77.50 — 5 degree credits — text price \$14-16 — Policoff

An introductory survey of the large scale structure of the universe including the definition of certain properties of stars, such as magnitude, luminosity, and brightness. Topics include the sun, the spectral classification of the stars, clusters, nebulae, galaxies, quasars, cosmology, and cosmogony. Observations of the night sky will be required. Knowledge of high school algebra helpful.

### Beekeeping

See Entomology

### Biology

#### Biol 1011 GENERAL BIOLOGY (1600)

16 lessons — \$77.50 — 5 degree credits — text price \$15-20 — Swart

An introduction to the general principles of biology. The topics of heredity, cells, chemistry and biological molecules, metabolism development, ecology, and evolution are discussed. Simple laboratory exercises are performed. **This course is now in preparation; please inquire before enrolling.**

#### Biol 1101 HEREDITY AND HUMAN SOCIETY (T161)

\$62 — 4 degree credits — Fan

The principles of heredity and their social implications. Emphasis is placed on man. Topics covered include how genes can be altered, how this alteration can cause diseases and how genetic information is inherited. Also discussed are the genetic basis of sex, evolution, genetic engineering and virus-causes diseases. (For students in programs not directly related to biological sciences; no credit if taken after GCB 3022 or Biol 3032.) **This course will be broadcast on KTCA-TV Channel 2, Fall 1976.**

### Business Administration

Please see the following departmental listings for course offerings:

- Accounting
- Business Law
- Business Studies (General College)
- Industrial Relations
- Insurance
- Marketing

### Business Writing

See English Composition



## Business Law

### **BLaw 3058 INTRODUCTION TO LAW, AND THE LAW OF CONTRACTS AND AGENCY (1858)**

12 lessons — \$62 — 4 degree credits — text price \$18-20 — Donnelly  
Study of the origin of law, its place in and effect upon society; the history and development of law; the systems of courts; and legal procedure. An extensive study of the law of contracts as the basic law affecting business transactions. Also a study of law affecting the relationship between principal and agent, master and servant, and employer and employee.

### **BLaw 3078 PARTNERSHIPS, CORPORATIONS, AND LAW OF REAL PROPERTY (1878)**

12 lessons — \$62 — 4 degree credits — text price \$18-20 — 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 — \$62 — 4 degree credits — text price \$18-20 — 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)

Also see Data Processing

### **GC 1511 INTRODUCTION TO MODERN BUSINESS (1616)**

15 lessons — \$77.50 — 5 degree credits — text price \$12-14 — Hower  
Intended for both business and general education; provides an overview of economic environment in which business operates. Major functions of a business organization are surveyed, including production, finance, personnel, and marketing. A useful introductory course for students planning to do more work in business, but also recommended for those who want to survey the field without studying it in detail.

### **GC 1513 PRINCIPLES OF SMALL BUSINESS OPERATIONS (1617)**

14 lessons — \$62 — 4 degree credits — text price \$14-16 — Ludlow  
Designed for those who plan to purchase or begin some form of small business in a marketing-related field, i.e., nonmanufacturing. The course revolves around the basic areas of inquiry necessary to start the business. Topics include: identification of the market and business location, organizational structure and management of employees, financial resources and projecting financial needs, record keeping, and developing advertising-promotional plans. The approach used is to familiarize the student with resources available to aid him in making decisions to open the business. The student will complete all assignments relating to a business area of his choosing. Essentially, completion of assignments involves the investigation of various resources to aid in making the decisions and the following of logical steps necessary to open a business operation.

### **GC 1537 SALESMANSHIP (1621)**

10 lessons — \$46.50 — 3 degree credits — text price \$9-11 — Goodnough  
Designed for the student in a sales position or interested in a sales career. Topics include: attitudes, knowledge, and skills needed for success in selling; consumer motivation; pre-sales planning and approach; determining wants and needs; answering objections and completing the sale. Emphasis is on a customer-oriented approach using a problem-solving method. (Concurrent employment in a selling or sales-related occupation is recommended but not required.)

## Course Descriptions

### **GC 1731 CONSUMER PROBLEMS (1618)**

15 lessons — \$77.50 — 5 degree credits — text price \$12-14 — Kroll

Consumer Problems is for anyone who feels the need to improve his understanding of how our economy functions, what challenges he faces, and what can be done to function more efficiently in our marketing-oriented system. The assignments include reading, field work, and writing, and they will help the student: identify consumer problems and where to get help in dealing with them; understand how the marketing system affects the consumers' ability to make appropriate decisions; develop skill in managing time and budgeting financial resources; and make decisions in such specific purchasing areas as food, housing, insurance, saving, etc.

## Child Psychology

Also see Psychology

### **CPsy 1301 CHILD PSYCHOLOGY (8280)**

14 lessons — \$62 — 4 degree credits — text price \$12-14 — Dickison

Designed to provide an understanding of children and their development, the methods used by child psychologists, and the critical evaluation of research. Topics include: personality and social behavior, biological bases and cognitive development, and the work of Jean Piaget. (Prerequisite: 5 credits introductory psychology)

### **CPsy 5303 ADOLESCENT PSYCHOLOGY (8282)**

12 lessons — \$68 — 4 degree credits — text price \$15-17 — Keating

Survey of the behavior and psychological development of the adolescent including: biological considerations, cognition and creativity, moral development, parent-child relations, peers, ego identity, sexual development, school adjustment, social-cultural considerations, and the adolescent subculture. (Prerequisite: 5 credits introductory psychology)

## Chinese

See East Asian Languages

## Civil Engineering

### **CE 0001C SOILS ENGINEERING (2855)**

13 lessons — \$62 — 4 certificate credits — text price \$14-16 — Kersten

Intended for engineers and students who wish to become familiar with the basic principles of soil behavior. Texture and mechanical analysis; weight-volume-moisture relationships; compaction; soil constants and engineering classification. Permeability; shear strength; stresses due to boundary loads. Lateral pressures; compressibility and consolidation; frost action.

### **CE 0302C CONCRETE AND CONCRETE MATERIALS (2896)**

16 lessons — \$46.50 — 3 certificate credits — text price \$4-6 — Skok

Includes a study of materials from which concrete is made, methods of designing a concrete mixture, the principles of air-entrained concrete, methods of measuring and controlling the air content, the chemical constitution of cement, properties of concrete, the practical aspects of proportioning, mixing, placing, and curing concrete and other special related topics. (Prerequisite: Basic knowledge of algebra, physics, and chemistry)

## Classics

### **Classics**

### **Clas 1048 TECHNICAL TERMS OF SCIENCE, MEDICINE, AND THE HUMANITIES (5248)**

16 lessons — \$46.50 — 3 degree credits — text price \$1 — Bisel

Presentation in English contexts of Greek and Latin prefixes, suffixes, and root words in modern technical vocabularies; special attention to medical terminology. No previous study of Greek or Latin required.

### **Clas 3071 RELIGION IN ANTIQUITY: GREEK, HELLENISTIC (K521)**

Audio Cassette Course — \$62 — 4 degree credits — text price \$15-17 — 15 audio cassettes \$24.70 (rent or purchase) — Wigtil

The course focuses on the Greek religion of the Archaic, Classical, and Hellenistic periods. Some of the specific topics examined include: death, sexuality, time, heroes, goddesses, and rituals. These topics are examined in the broader context of the non-Greek religions and philosophies of that period. See **Tapes and Tape Recorders** for information on renting audio cassettes and cassette recorders.

### **Clas 5005 MADNESS AND DEVIANT BEHAVIOR IN GREECE AND ROME (K522)**

\$68 — 4 degree credits — Erickson

Definitions of madness in Greece and Rome and theories of its etiology; assessment of predisposing factors in Greece and Rome; examples of madness from mythology, legend, and history; cross-cultural comparison with contemporary United States. **This course will be available on KUOM Radio 770, Winter 1977 and as an audio cassette course, Spring 1977.**

### **Clas 5145 CLASSICAL MYTHOLOGY: MYTHS AND THE MODERN WORLD (T591)**

\$68 — 4 degree credits — Hershbell

Investigates the successive interpretations of selected Greek and Roman myths and their influence on our literature, art, and music. **This course will be broadcast on KTCA-TV Channel 2, Winter 1977.**

## **Greek**

### **Grk 1101 BEGINNING CLASSICAL GREEK I (5901)**

15 lessons — \$77.50 — 5 degree credits — text price \$9-11 — Anderson

An introduction to Homeric and Classical Greek language: alphabet, vocabulary, and idioms. Selected readings from **Iliad** and **Odyssey** of Homer and Classical Greek selections of moderate difficulty. Written translation exercises, oral exercises, and introduction to scansion and meter. After the successful completion of two courses in Homeric Greek, the student may continue readings in the **Iliad** and **Odyssey**, or go on to Classical Drama, Hesiod, Xenophon, The New Testament, etc.

### **Grk 1102 BEGINNING CLASSICAL GREEK II (5903)**

15 lessons — \$77.50 — 5 degree credits — text price \$10-12 — Anderson

This course is a continuation of Grk 1101, an introduction to Homeric and Classical Greek language. Included in the course are a review of materials covered in Grk 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 — \$77.50 — 5 degree credits — text price \$10-12 — Benson

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 — \$77.50 — 5 degree credits — text price \$10-12 — Benson

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 — \$77.50 — 5 degree credits — text price \$10-12 — Benson

A review of the elements of Lat 1101 and Lat 1102, with a shift of emphasis to longer passages of continuous reading on Roman life. A considerable amount of historical and literary background is presented in English to orient the student to the material. (Prerequisite: Lat 1102 or equivalent)

## Course Descriptions

### Lat 1104 LATIN READINGS (6209)

15 lessons — \$77.50 — 5 degree credits — text price \$4-6 — Adams

Selections from Cicero, Livy, and Ovid will be read. In addition to the review of Latin grammar, which will be incorporated in the readings, the selections will familiarize the student with the legends of Rome's founding and early heroes, the defeat of her army by Hannibal at Cannae, the first important speech of her most brilliant orator, Cicero, and his correspondence after the assassination of Julius Caesar, and Ovid's poetic interpretation of several Greek myths. Literary and historical background material is provided in English with each lesson.

### Lat 3471 CICERO (6206)

16 lessons — \$46.50 — 3 degree credits — text price \$2-4 — Gulino

Readings from the most famous humanistic essays. (Prerequisite: Lat 1103 or equivalent)

## Composition

See English Composition

## Data Processing

### GC 1535 INTRODUCTION TO DATA PROCESSING (1966)

9 lessons — \$46.50 — 3 degree credits — text price \$20-\$22 — Folz

Designed to acquaint students with fundamentals of data processing. The following topics are covered: history of data processing; computer and data processing terminology; description and structure of computers; number systems; description, characteristics, data format, and applications of secondary storage devices; block diagramming; elementary programming in **BASIC** and **COBOL**; systems analysis in accounts receivable, payroll, and invoicing.

### GC 1572 INTRODUCTION TO BLOCK DIAGRAMMING AND PROGRAMMING (1972)

14 lessons — \$77.50 — 5 degree credits — text price \$13-15 — 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 — \$46.50 — 3 degree credits — text price \$14-16 — Selkurt

Principles of design applied to a series of interesting and practical problems using a variety of techniques; a basic course useful in elementary or junior high school teaching and as a foundation for other art courses.

## East Asian Languages

### Chinese

#### Chin 1101 BEGINNING CHINESE I (5501)

20 lessons — \$77.50 — 5 degree credits — text price \$17-19 — Na

Prepares for the reading and speaking of conversational Chinese. Introduces 312 characters and the basic structure of the Chinese sentence. A series of cassette tapes, corresponding to the lessons, is provided. See **Tapes and Tape Recorders** for information on renting audio cassettes and cassette recorders.

### **Chin 1102 BEGINNING CHINESE II (5502)**

17 lessons — \$77.50 — 5 degree credits — text price \$17-19 — 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 — \$77.50 — 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 — \$46.50 — 3 degree credits — text price \$11-13 — 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.

## **Ecology and Behavioral Biology**

Also see Forestry

### **EBB 3001 INTRODUCTION TO ECOLOGY (2010)**

12 lessons — \$62 — 4 degree credits — text price \$29-31 — Swain

A survey of the basic concepts in ecology dealing with the organization, development, and functioning of ecosystems; population growth and regulation. Man's impact on such systems will be considered throughout. **This course is now in preparation; please inquire before enrolling.**

## **Economics**

Also see Agricultural Economics

### **Econ 1001 PRINCIPLES OF MACROECONOMICS (2101)**

16 lessons — \$62 — 4 degree credits — text price \$19-21 — Gupta

Economic principles and their relation to the functioning of the economy. Topics include: gross national product with its measurement, components, and weaknesses; government fiscal policy; monetary policy and the creation of money; and the coordination of monetary and fiscal policy.

### **Econ 1002 PRINCIPLES OF MICROECONOMICS (2102)**

13 lessons — \$62 — 4 degree credits — text price \$19-21 — 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 — \$62 — 4 degree credits — text price \$14-16 — Gupta

Income and employment. Determinants of national income, employment, and price level, with particular attention to aggregate consumption and investment. (Prerequisite: Econ 1001 or equivalent).

### **Econ 3751 MONEY AND BANKING (2167)**

13 lessons — \$62 — 4 degree credits — text price \$22-24 — Usman

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 — \$68 — 4 degree credits — text price \$11-13 — Turnbull

Origins and development of economic and social problems of the individual worker, public and private attempts to deal with these issues; economic and social implications. **Also see Ins 3210. Students may not receive credit for both Econ 5534 and Ins 3210.**

## Course Descriptions

### **Econ 5534 ECONOMIC SECURITY (K211)**

Audio Cassette Course — \$68 — 4 degree credits — text price \$11-13 — 14 audio cassettes \$22.36 (rent or purchase) — Williams

Same as above; lectures available on audio cassettes. **Also see Ins 3210. Students may not receive credit for both Econ 5534 and Ins 3210.** See **Tapes and Tape Recorders** for information on renting audio cassettes and cassette recorders.

### **Econ 5537 LABOR MARKET BEHAVIOR AND REGULATION (2173)**

16 lessons — \$68 — 4 degree credits — text price \$12-14 — Turnbull

Employer-employee-union relationships and their social control; legislative, executive, and judicial attempts to deal with these issues; economic and social implications. (Prerequisite: Econ 3501 or Econ 3551 or equivalent, or consent of instructor)

## Education

Also see Child Psychology; Recreation and Park Administration

### History and Philosophy of Education

#### **Hed 1004 INTRODUCTION TO PHILOSOPHY OF EDUCATION (2604)**

21 lessons — \$62 — 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 — \$46.50 — 3 degree credits — text price \$18-20 — 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 — \$51 — 3 degree credits — text price \$13-15 — Dupuis

The principal aim is to answer the following question: What are the outstanding points of view in education today? Such practical questions as discipline, freedom, indoctrination, teacher-pupil relations, and progressive methods will be treated as they relate to underlying 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 STATISTICS (2660)**

16 lessons — \$46.50 — 3 degree credits — text price \$14-16 — Giese

Elementary statistical methods and their application to behavioral science and educational problems. The commonly used statistical terms and methods such as mean, median, mode, percentiles, graphs, standard deviation, correlation, standard scores, and test analysis are considered. An attempt is made to give the student a thorough understanding of statistics, including an introduction to inferential statistics. Emphasis is placed on the intelligent use of statistical methods so that the student may interpret behavioral science data correctly. (Prerequisite: 6 credits in psychology or permission of instructor)

## Engineering

Please see the following departmental listings for course offerings:

Aerospace Engineering and Mechanics  
Civil Engineering  
Industrial Engineering/Operations Research

## English

### Composition

#### Comp 0001 PREPARATORY COMPOSITION (3500)

16 lessons — \$62 — 4 degree credits — text price \$17-19 — Klemz  
Remedial course in composition. Students remaining in the course until ready to enter Comp 1002 will receive credit.

#### Comp 0002 GRAMMAR REVIEW (3505)

11 lessons — \$31 — 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 0011 THE WRITING OF POETRY (3509)

12 lessons — \$31 — no credit — text price \$28-30 — 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 — \$31 — no credit — text price \$28-30 — Carson  
The student will have complete independence to submit work for evaluation by the instructor. Designed to provide the student with a sympathetic yet critical appraisal of his work. (Prerequisite: Consent of instructor)

#### Comp 0017 INDEPENDENT WRITING (3580)

16 lessons — \$46.50 — no credit — no required text — Sandell  
Consists of manuscript criticism. There are no assignments or lesson materials. Intended for advanced students who want criticism. The instructor will read approximately 16,000 words divided into lessons as the student wishes. Poetry is not covered in the course. S/N grading only. (Prerequisite: Consent of instructor)

#### Comp 0018 SHORT MANUSCRIPT CRITICISM (3581)

6 lessons — \$15.50 — no credit — no required text — Sandell  
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 — \$62 — 4 degree credits — text price \$10-12 — 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. (The English Placement Test is available to students who wish to test their level of competency, but the test is not a prerequisite for enrollment in Comp 1001.)

## Course Descriptions

### Comp 1002 INTRODUCTORY COMPOSITION (3512)

10 lessons — \$62 — 4 degree credits — text price \$16-18 — Galle  
Continuation of Comp 1001 with emphasis on style, tone, and such larger strategies as argumentation and analysis. Subject matter for essays drawn from assigned readings of nonfictional prose. (Prerequisite: Comp 1001)

### Comp 1027 INTERMEDIATE COMPOSITION: EXPOSITION (3527)

12 lessons — \$62 — 4 degree credits — text price \$14-16 — Klemz  
Mastery of the techniques of expository writing. Attention to rhetorical modes, logic, and organization; analysis of assigned essays to develop skill in critical reading; emphasis on reader awareness, language, and style. (Prerequisite: Freshman Composition or equivalent)

### GC 1531 BUSINESS WRITING (3513)

14 lessons — \$62 — 4 degree credits — text price \$14-16 — Warren  
A course in effective business writing, emphasizing the relationship between creative writing and successful management; the course will focus on various challenging business situations, all calling for a knowledge of human needs and the ability to write complete, concise, clear, correct, and convincing business letters, memorandums, and 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

### Engl 1016 INTRODUCTION TO AMERICAN LITERATURE: SOME MAJOR FIGURES AND THEMES (3671)

12 lessons — \$62 — 4 degree credits — text price \$15-17 — Griffin  
Examination of a few selected themes that recur in American writing. Not a survey of literary history. Main emphasis on the fate of innocence in American fiction with some attention to the ways several writers treat the problem of establishing a distinctively "American" identity. (Prerequisite: Freshman Composition or equivalent)

### Engl 1017 INTRODUCTION TO MODERN LITERATURE: POETRY (3676)

14 lessons — \$62 — 4 degree credits — text price \$10-12 — Furia  
A study of modern British and American poetry organized around themes (war, the city, nature, death, love, etc.) and including such writers as Yeats, Thomas, Auden, Eliot, Frost, Cummings, and Stevens. **This course is now in preparation; please inquire before enrolling.**

### Engl 1018 INTRODUCTION TO MODERN LITERATURE: PROSE FICTION (3638)

16 lessons — \$62 — 4 degree credits — text price \$16-18 — Basham  
The British and American novel in the 20th century: Dreiser, Lawrence, Joyce, Huxley, Faulkner, Hemingway, Steinbeck, Cary, and Bellow. (Prerequisite: Freshman Composition or equivalent)

### Engl 1821 INTRODUCTION TO LITERATURE I (3621)

15 lessons — \$62 — 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. Includes: Chaucer, Marlowe, Spenser, Shakespeare, and Milton. (Prerequisite: Freshman Composition or equivalent)

### Engl 3241 SHAKESPEARE I (3655)

16 lessons — \$62 — 4 degree credits — text price \$14-16 — Shaw  
The development of Shakespeare's dramatic art is traced chronologically from the earliest plays to two of the mature tragedies. The student becomes familiar with the various types of Shakespeare's drama: comedy, tragedy, and history. (Prerequisite: Freshman Composition or equivalent and 5 additional credits in English, or consent of instructor)

### Engl 3242 SHAKESPEARE II (3656)

16 lessons — \$62 — 4 degree credits — text price \$14-16 — Shaw  
Continuation of Engl 3241. Shakespeare's later career from 1600 to 1611. Tragedies, romantic comedies, romances, and one problem comedy. (Prerequisite: Engl 3241 or consent of instructor)



### Engl 3411 AMERICAN LITERATURE I (3672)

16 lessons — \$62 — 4 degree credits — text price \$16-18 — Kurak

The development of American literature and thought from the beginnings through the early American Renaissance. Authors studied include some from the colonial and early national periods and such major figures as Poe, Emerson, Melville, and Hawthorne. (Prerequisite: Freshman Composition or equivalent and 5 additional credits in English, or consent of instructor)

### Engl 3412 AMERICAN LITERATURE II (3673)

16 lessons — \$62 — 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 — \$62 — 4 degree credits — text price \$12-14 — Kurak

Continuation of Engl 3412. American literature from the end of the 19th century of 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 3920 POPULAR FICTION: DETECTIVE AND THRILLER (K361)

\$62 — 4 degree credits — Roth

The course will focus on the conventions peculiar to these two forms of popular fiction and attempt to discover their meaning and relevance. **This course will be available on KUOM Radio 770, Spring 1977 and as an audio cassette course, Summer 1977.**

### Engl 5153 TWENTIETH CENTURY ENGLISH NOVEL (3660)

15 lessons — \$68 — 4 degree credits — text price \$13-15 — P. Reed

A study of the British novel in the 20th century, emphasizing some of its main ideas, techniques, and relationships to the history of the novel. Selected authors of historical or representative importance include Forster, Joyce, Lawrence, Woolf, Waugh, Caryl Phillips, Amis, Sillitoe, Murdoch, and Burgess. **This course is now in preparation; please inquire before enrolling.**

### Engl 5221 CHAUCER (3675)

21 lessons — \$62 — 4 degree credits — text price \$9-11 — Ferris

A study of *The Canterbury Tales* of Geoffrey Chaucer, the last and greatest work of the first major English poet. The course emphasizes Chaucer's varied artistry in characterization, narrative, and humor, his presentation and criticism of the society he lived in, and his relation to the great authors, such as Dante and Shakespeare, who preceded and followed him. Opportunity is given for additional reading and original critical writing. The reading is done in the original early English, but only such emphasis is put on the language as serves to illuminate the quality and meaning of the poetry. (Prerequisite: Freshman Composition or equivalent and 5 additional credits in either English or Humanities)

### Engl 5261 MILTON (3692)

9 lessons — \$68 — 4 degree credits — text price \$13-15 — McNaron

Course covers the following poems: *Comus*, *Lycidas*, *Areopagitica*, *Paradise Lost*, and *Samson Agonistes*. (Prerequisite: Freshman Composition or equivalent and 5 additional credits in English, or consent of instructor)

### GC 1374 LITERATURE OF THE THEATRE: FILM AND DRAMA (3605)

15 lessons — \$62 — 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 student, therefore, should have access to television, a film society, or a film theatre. **This course is now in preparation; please inquire before enrolling.**

## Course Descriptions

### Entomology

#### Ent 0004C PRINCIPLES OF BEEKEEPING (1004)

16 lessons — \$46.50 — 3 certificate credits — text price \$9-11 — Furgala

Useful to both the nonexperienced and experienced beekeeper. History of beekeeping, life history and behavior of honey bees; colony and apiary management; pollination and hive products; honey bee diseases and their control.

### Family Studies

#### FSoS 1001 THE DYNAMICS OF DATING, COURTSHIP, AND MARRIAGE (4101)

10 lessons — \$46.50 — 3 degree credits — text price \$20-22 — R. Bell

Designed to improve interpersonal relations and self-understanding. Includes a discussion of communication, dating, and love involvement, changing sex roles, human sexuality, mate selection and engagement, marital interaction, marital conflict, parenthood and the family in American society.

#### FSoS 5001 HUMAN SEXUAL BEHAVIOR (4103)

12 lessons — \$68 — 4 degree credits — text price \$11-15 — Engel

Examination of biological, psychological, and social aspects of human sexuality. Topics include: sex education; sexual communication; sex in literature, history, and religion; sexual anatomy and physiology; birth control; pregnancy and childbirth; childhood sexuality, adolescent sexuality, adult sexuality, and sexuality in old age; sexual attitudes and behaviors of today, the sexual revolution; sexual motivation, attraction, arousal, and stimulation; sexual intercourse, orgasm, and satisfaction; sexual problems and dysfunction; homosexuality; pornography, prostitution, and rape; human liberation, sex roles and sexism. Goals of the course include increased awareness and acceptance of oneself and others as sexual human beings; and increased comfort in dealing with and talking about sexuality. (Prerequisite: Introductory course in psychology, sociology, or equivalent; or consent of instructor). **This course is now in preparation; please inquire before enrolling.**

#### FSoS 5210 FAMILY IN WORLD PERSPECTIVE (4105)

15 lessons — \$85 — 5 degree credits — text price \$15-17 — Henry

The course will emphasize comparison of kinship, marriage, family organization, the family life cycle, and modes of family functioning across cultures. It will also concern itself with the relationship of the family to the economic, the political, the religious, and other social institutions, with particular attention being addressed to the adaptive techniques of the family to industrialization and urbanization. It is hoped that the student will be stimulated to an appreciation of the essential similarities between peoples and kinship groupings across cultures.

#### FSoS 5240 SPECIAL TOPICS: THE DYNAMICS OF DIVORCE (T411)

Video Cassette Course — \$51 — 3 degree credits — text price \$15-17 — study guide \$3 — Nevaldine

Designed to help professionals, couples, and individuals achieve an understanding of the divorce process, including the troubled marriage and marital breakdown, legal aspects and implications, reentry into the single life, parent and person, the child and divorce, and coping with the psychological aspects of divorce. Seven half-hour programs available on video cassettes. **Enrollment restricted to students who can view the cassettes at the Learning Resources Center, Walter Library, Minneapolis Campus.**

#### GC 1722 PARENT-CHILD RELATIONSHIPS (K411)

Audio Cassette Course — \$62 — 4 degree credits — text price \$9-11 — 13 audio cassettes \$21.58 (rent or purchase) — Latts

An interdisciplinary course aimed at helping students to develop their own philosophy of child-rearing — attitudes, principles, and perspectives that will guide them in their relations to their children and performance of their parental responsibilities. Focus is on helpful information related to crises of parenthood. Relevant research is used to emphasize principles of parent-child relations and to prepare students for tasks of parenthood. See **Tapes and Tape Recorders** for information on renting audio cassettes and cassette recorders.

## Finnish

See Scandinavian Languages

## Fire Protection

### FPro 0001C INTRODUCTION TO FIRE PROTECTION (5001)

10 lessons — \$46.50 — 3 certificate credits — text price \$2-4 — (\$40 for optional text) — Hannon  
This course examines the fire problem in the United States in general, and in the State of Minnesota in particular. An examination is made of the reasons that a fire problem exists, what organizations are available to attempt to solve the fire problem, and where we are in our attempts to provide adequate fire protection. Special emphasis is placed on the importance of the report issued by The National Commission on Fire Prevention and Control. This report, entitled *America Burning*, is one of the texts for the course. **This course is now in preparation; please inquire before enrolling.**

### FPro 0002C HAZARDOUS MATERIALS AND PROCESSES I (5002)

10 lessons — \$46.50 — 3 certificate credits — text price \$25-27 — Berg  
This first course of a three course sequence is designed to give the student an understanding of the basic physical and chemical laws underlying the behavior of matter. The behavior and reactions of water to other substances is critically discussed. Terminologies and regulations given in various handbooks are explained so that the student attains fast and easy access to the data. **This course is now in preparation; please inquire before enrolling.**

### FPro 0004C FIRE PREVENTION AND CONTROL (5004)

11 lessons — \$46.50 — 3 certificate credits — text price \$25-50 — Buresh  
In addition to the traditional fire prevention methods that govern the maintenance of buildings and premises, the course develops an interrelationship between the design and construction features that relate to maintaining the protection provided through the enforcement of a building code; in short, the built-in control that keeps a small fire small. The course is designed to expose the student to the many aspects of fire prevention and control and provide the background for recognizing, researching, and developing practical solutions to fire prevention and control problems. S/N grading only.

### FPro 0005C FIRE PROTECTION AND LIFE SAFETY SYSTEMS IN BUILDING DESIGN (5005)

9 lessons — \$46.50 — 3 certificate credits — text price \$6-8 — Bose  
The major systems for protecting the occupants of modern buildings from the hazards of fire, smoke, and similar unsafe conditions are studied here. Offered as a professional development course of study, it can be helpful to members of the fire services, architects, engineers, building inspectors, and others with life safety responsibilities within buildings. While a certain amount of technical subject matter is included, a minimal technical background is sufficient for a good comprehension of the subject.

### FPro 0007C FIRE DEPARTMENT ADMINISTRATION (5007)

10 lessons — \$46.50 — 3 certificate credits — text price \$21-23 — J. Bell  
Analysis of objectives, organization, and management of municipal fire departments, including a brief historical review. The relationships the fire department has with associate municipal departments, the municipal organizational structure, and the community are examined. A variety of administrative areas will be considered to strengthen the fire officer's knowledge and skill in the decision-making process.

## Food Science and Nutrition

### FScN 1010 MAN'S FOOD (4301)

16 lessons — \$62 — 4 degree credits — text price \$31-33 — 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. **Students may not receive credit for both FScN 1010 and FScN 1012.**

## Course Descriptions

### FScN 1012 FOOD FOR THOUGHT (K431)

Audio Cassette Course — \$62 — 4 degree credits — text price \$5-7 — 13 audio cassettes \$21.58 (rent or purchase) — Labuza

Provides the student with information from which he can develop sound nutritional guidelines for himself, explains why food is processed as well as how it is processed, and gives guidelines in analyzing the effectiveness of nutritional claims for special food and diets. The course will cover nutritional requirements of man and the physiology of digestion. An analysis of food fads and the world food malnutrition problem will also be examined. **Students may not receive credit for both FScN 1010 and FScN 1012.** See **Tapes and Tape Recorders** for information on renting audio cassettes and cassette recorders.

## Forestry

### For 1201 CONSERVATION OF NATURAL RESOURCES (4201)

16 lessons — \$46.50 — 3 degree credits — text price \$7-9 — Staff

Current status, utilization, and sound management of natural resources with emphasis on the ecological approach. Conservation principles and their application to soil, water, forests, grasslands, wildlife, minerals, and energy sources.

## French

### Fren 0001 FRENCH FOR GRADUATE STUDENTS (5717)

16 lessons — \$46.50 — no credit — text price \$5-7 — O'Donnell

Fundamentals of grammar; reading of appropriate prose. Prepares for graduate reading examination in French.

### Fren 1101 BEGINNING FRENCH I (5704)

16 lessons — \$77.50 — 5 degree credits — text price \$8-10 — audio tape price \$11.75 (rent or purchase) — Akehurst

Audio-lingual approach to elementary French; adapted for home use. See **Tapes and Tape Recorders** for information on renting audio cassettes and cassette recorders.

### Fren 1102 BEGINNING FRENCH II (5705)

16 lessons — \$77.50 — 5 degree credits — text price \$8-10 — audio tape price \$11.75 (rent or purchase) — Akehurst

Continuation of French 1101. See **Tapes and Tape Recorders** for information on renting audio cassettes and cassette recorders. **This course is now in preparation; please inquire before enrolling.**

### Fren 1103 BEGINNING FRENCH III (5706)

17 lessons — \$77.50 — 5 degree credits — text price \$8-10 — audio tape price \$11.75 (rent or purchase) — Akehurst

Continuation of French 1101. See **Tape and Tape Recorders** for information on renting audio cassettes and cassette recorders. **This course is now in preparation; please inquire before enrolling.**

## Gardening

See Horticultural Science

## General College

As nearly as possible, General College courses are planned to be complete in themselves. Emphasis is on relationships within and among fields of knowledge rather than intensive study of isolated segments. Most courses do not have prerequisites.

Please refer to the following pages for General College course offerings:

- GC 1048 Basic Craft Skills, p. 11
- GC 1071 Introduction to Aging, p. 42
- GC 1161 Solar Astronomy, p. 12
- GC 1162 Stellar Astronomy, p. 12
- GC 1221 Minnesota History, p. 30
- GC 1222 People Power: The World of Practical Politics, p. 39
- GC 1283 Psychology of Human Development, p. 42
- GC 1355 Ethics, p. 37
- GC 1374 Literature of the Theatre: Film and Drama, p. 21
- GC 1404 Vocabulary Building, p. 46
- GC 1445 Mathematics: Intermediate Algebra, p. 34
- GC 1511 Introduction to Modern Business, p. 13
- GC 1513 Principles of Small Business Operation, p. 13
- GC 1531 Business Writing, p. 20
- GC 1535 Introduction to Data Processing, p. 16
- GC 1537 Salesmanship, p. 13
- GC 1572 Introduction to Block Diagramming and Programming, p. 16
- GC 1631 The Helping Process in the Social Services, p. 42
- GC 1637 Supervised Work Experience in the Social Services, p. 43
- GC 1722 Parent-Child Relationships, p. 22
- GC 1731 Consumer Problems, p. 14
- GC 3234 Power and the Individual, p. 39

## Geography

### Geog 1973 GEOGRAPHY OF THE TWIN CITIES (T441)

\$62 — 4 degree credits — Lukermann

The development of the Twin Cities as a metropolitan regional center: evolution of the urban settlement and the regional economy; role and function of Minneapolis, St. Paul, and the neighborhoods as separate entities; future of the Twin Cities as a regional and national metropolis. (No credit if taken after Geog 3973) **This course will be broadcast on KTCA-TV Channel 2, Spring 1977.**

### Geog 3101 GEOGRAPHY OF THE UNITED STATES AND CANADA (4453)

14 lessons — \$62 — 4 degree credits — text price \$13-15 — Steinhauser

Provides an opportunity to study and evaluate the character and diversity of the various regions of the United States and Canada. The influence of both cultural and physical environments upon people and their use of the land is emphasized. Cities are observed as the dominant feature of the technological-industrial complex. Problems are considered on both a national and regional basis.

### Geog 3111 GEOGRAPHY OF MINNESOTA (4407)

14 lessons — \$62 — 4 degree credits — text price \$3-5 — Steinhauser

Provides an opportunity to study and evaluate the cultural, physical, and economic characteristics of Minnesota. The choices people have 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 — \$62 — 4 degree credits — text price \$12-14 — Steinhauser

Provides an opportunity to study and evaluate the character and diversity of the South American continent. Individual countries and major regions within them are analyzed. The influence of both cultural and physical elements upon people and their use of the land is emphasized. Problems are considered on both a national and regional basis.

## Course Descriptions

### Geog 3181 GEOGRAPHY OF THE U.S.S.R. (4452)

14 lessons — \$62 — 4 degree credits — text price \$17-19 — Steinhauser  
Provides an opportunity to study and evaluate the character and diversity of the regions of the Soviet Union. The major regions are observed from a cultural, physical, and economic viewpoint. Following the study of the regions, the Soviet Union is presented by topical analysis of cultural and economic phenomena including foreign trade, aid, and international relations.

## Geology and Geophysics

### Geo 1001 PHYSICAL GEOLOGY (4501)

18 lessons — \$77.50 — 5 degree credits — text price \$12-14 — 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.

### Geo 1006 HISTORICAL GEOLOGY (4502)

16 lessons — \$46.50 — 3 degree credits — text price \$10-12 — Sloan  
Evolution of the earth from its origin to the present, with special attention to the succession of physical and biological events of the past 600 million years; emphasis on the geological history of the North American continent. (Prerequisite: Geo 1001 or Geo 1111)

### Geo 5151 INTRODUCTION TO PALEONTOLOGY (4551)

18 lessons — \$85 — 5 degree credits — text price (including fossil kit) \$40-42 — Sloan  
An introduction to morphology and classification of major fossil groups. The use of fossils in the study of evolution, along with methods of collection and identification, are emphasized. (Prerequisite: Geo 1002 or Geo 1112, or introductory college biology)

## German

### Ger 0221 GERMAN FOR GRADUATE STUDENTS I (5817)

16 lessons — \$46.50 — no credit — text price \$8-10 — 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 — \$62 — 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 — \$77.50 — 5 degree credits — text price \$12-14 — Christensen  
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 — \$77.50 — 5 degree credits — text price \$12-14 — Christensen  
Continuation of Ger 1101. (Prerequisite: Ger 1101 or 1 year of high school German)

### Ger 1103 BEGINNING GERMAN III (5803)

27 lessons — \$77.50 — 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 — \$77.50 — 5 degree credits — text price \$7-9 — Menze  
 Reading of 11 short stories of medium difficulty and one drama; composition continued. (Prerequisite: Ger 1103 or 3 years of high school German)

**Ger 3011 ELEMENTARY COMPOSITION I (5857)**

11 lessons — \$31 — 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)

**Ger 3012 ELEMENTARY COMPOSITION II (5858)**

11 lessons — \$31 — 2 degree credits — text price \$8-10 — Menze  
 Continuation of Ger 3011; grammar, idioms, and characteristics of written German. Further practice in writing original compositions. (Prerequisite: Ger 3011)

**Ger 3013 ELEMENTARY COMPOSITION III (5859)**

11 lessons — \$31 — 2 degree credits — text price \$5-7 — Menze  
 Intensive practice in the use of conversational and written German and in the writing of original compositions. (Prerequisite: Ger 3012)

**Ger 3311 DRAMA: THE CLASSICAL PERIOD (5873)**

16 lessons — \$62 — 4 degree credits — text price \$11-13 — Menze  
 Selected plays of Lessing, Schiller, and Goethe, with assigned readings and one report. (Prerequisite: Ger 1301 or consent of instructor)

**Ger 3312 DRAMA: THE 19TH CENTURY (5874)**

16 lessons — \$62 — 4 degree credits — text price \$10-12 — Menze  
 Selected plays of Kleist, Grillparzer, and Hebbel, with assigned readings and one report. (Prerequisite: Ger 3311 or consent of instructor)

**Ger 3313 DRAMA: THE MODERN PERIOD (5875)**

16 lessons — \$62 — 4 degree credits — text price \$11-13 — Menze  
 Selected plays representing the more recent movements in German literature — naturalism, impressionism, expressionism. Includes assigned readings and one report. (Prerequisite: Ger 3312 or consent of instructor)

**Ger 3321 GERMAN PROSE OF THE 19TH CENTURY (5876)**

16 lessons — \$62 — 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 — \$62 — 4 degree credits — text price \$8-10 — Menze  
 Selected novellen by Gerhart Hauptmann, Arthur Schnitzler, Thomas Mann, Richarda Huch, Wilhelm Schafer, and Hermann Hesse. (Prerequisite: Ger 3321 or equivalent)

**Ger 3323 GERMAN PROSE OF THE 20TH CENTURY (5878)**

16 lessons — \$62 — 4 degree credits — text price \$8-10 — Menze  
 Selected novellen by Franz Kafka, Robert Musil, Wolfgang Borchert, Heinrich Böll, and other renowned mid-century prose writers. (Prerequisite: Ger 3322 or equivalent)

**Greek**

See Classics

**History**

**Hist 1001 INTRODUCTION TO MODERN EUROPEAN HISTORY I (4701)**

12 lessons — \$62 — 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.

## Course Descriptions

### **Hist 1002 INTRODUCTION TO MODERN EUROPEAN HISTORY II (4702)**

12 lessons — \$62 — 4 degree credits — text price \$20-22 — Harris

A survey of European history in the 18th and 19th centuries. Emphasis is on the struggle for control of the state, the Age of Reason, the French Revolution.

### **Hist 1003 INTRODUCTION TO MODERN EUROPEAN HISTORY III (4703)**

12 lessons — \$62 — 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 — \$46.50 — 3 degree credits — text price \$14-16 — 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. **Also see Hist 1061.**

### **Hist 1052 HISTORY OF ANCIENT CIVILIZATION II (4715)**

16 lessons — \$46.50 — 3 degree credits — text price \$18-20 — Jones

History of the rise and flowering of Greek civilization from the earliest times to the death of Alexander the Great in 323 B.C. Special emphasis is placed on Greek civilization in the fifth century (Age of Pericles) with attention to the political, social, literary, artistic, and philosophic achievements of that period. (No prerequisite; Hist 1051 helpful in providing background for the Greek period) **Also see Hist 1062.**

### **Hist 1053 HISTORY OF ANCIENT CIVILIZATION III (4716)**

16 lessons — \$46.50 — 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) **Also see Hist 1063.**

### **Hist 1061 BASIC READINGS IN ANCIENT CIVILIZATION I (4717)**

12 lessons — \$31 — 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 — \$31 — 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 — \$31 — 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 1101/3101 MEDIEVAL AND RENAISSANCE HISTORY I (4731/4732)**

12 lessons — \$62 — 4 degree credits — text price \$28-30 — B. Bachrach

This is a three-course sequence, and part one (1101/3101) covers the period from the fall of the Roman Empire to circa 900. Students enrolling in the 3-level course will be expected to do additional work.



## Course Descriptions

### **Hist 1102/3102 MEDIEVAL AND RENAISSANCE HISTORY II (4733/4734)**

12 lessons — \$62 — 4 degree credits — text price \$26-28 — B. Bachrach

Part two of this three-course sequence covers the High Middle Ages. Students enrolling in the 3-level course will be expected to do additional work.

### **Hist 1103/3103 MEDIEVAL AND RENAISSANCE HISTORY III (4735/4736)**

12 lessons — \$62 — 4 degree credits — text price \$30-32 — B. Bachrach

Part three of this three-course sequence covers the later Middle Ages and the Renaissance. Students enrolling in the 3-level course will be expected to do additional work. **This course is now in preparation; please inquire before enrolling.**

### **Hist 1151/3151 ENGLISH HISTORY (4709/4710)**

12 lessons — \$62 — 4 degree credits — text price \$25-27 — D. Bachrach

Part one of a two-part sequence covers the history of England from earliest times to the death of Queen Elizabeth I. Students enrolling in the 3-level course will be expected to do extra work. **This course is now in preparation; please inquire before enrolling.**

### **Hist 1152/3152 ENGLISH HISTORY (4711/4712)**

12 lessons — \$62 — 4 degree credits — text price \$25-27 — D. Bachrach

Part two of this two-part sequence covers the period from the Stuart accession through the Cold War. Students enrolling in the 3-level course will be expected to do additional work. **This course is now in preparation; please inquire before enrolling.**

### **Hist 1301 AMERICAN HISTORY I (4725)**

14 lessons — \$62 — 4 degree credits — text price \$14-16 — Pearson

United States history from colonial times to Reconstruction. A survey course emphasizing political, economic, social, and diplomatic history of the U.S. to 1877. **This course is now in preparation; please inquire before enrolling.**

### **Hist 1302 AMERICAN HISTORY II (4726)**

14 lessons — \$62 — 4 degree credits — text price \$14-16 — Pearson

Continuation of History 1301. **This course is now in preparation; please inquire before enrolling.**

### **Hist 1451/3451 ASIAN CIVILIZATION I (4741/4744)**

15 lessons — \$62 — 4 degree credits — text price \$21-23 — Kopf

Ancient societies in East, South, and West Asia. Students enrolling in the 3-level course will be expected to do extra work. **This course is now in preparation; please inquire before enrolling.**

### **Hist 1452/3452 ASIAN CIVILIZATION II (4742/4745)**

12 lessons — \$62 — 4 degree credits — text price \$21-23 — Kopf

Fifth through the 18th centuries. Students enrolling in the 3-level course will be expected to do extra work. **This course is now in preparation; please inquire before enrolling.**

### **Hist 1453/3453 ASIAN CIVILIZATION III (4743/4746)**

15 lessons — \$62 — 4 degree credits — text price \$21-23 — Kopf

The modern era. Students enrolling in the 3-level course will be expected to do extra work. **This course is now in preparation; please inquire before enrolling.**

### **Hist 5051 HISTORY OF THE ANCIENT NEAR EAST I (4783)**

16 lessons — \$51 — 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 — \$51 — 3 degree credits — text price \$5-7 — Jones

The Age of Empires: 1600-1000 B.C. Main topics: the New Kingdom (Empire) in Egypt; the Hittite Empire; developments in Syria and Palestine with special attention to the Canaanites, Philistines, and Hebrews; the spread of civilization to Asia Minor and Aegean lands. (Prerequisite: Junior or senior, or 9 credits in history)

## Course Descriptions

### **Hist 5274 THE MODERN NEAR EAST: THE OTTOMAN EMPIRE AND THE SUCCESSOR STATES (4799)**

16 lessons — \$68 — 4 degree credits — text price \$23-25 — Stavrou

Covers the period from the Treaty of Jassy (1792) to the Congress of Berlin (1878).

### **GC 1221 MINNESOTA HISTORY (4708)**

15 lessons — \$77.50 — 5 degree credits — text price \$13-15 — Moen

An introduction to the people and institutions of the state. Topics surveyed are geography, exploration, frontier settlement, changes forced upon Indian people, statehood, economic development, parties and politics, and education, arts, and letters.

## Horse Production

See Animal Science

## Horticultural Science

### **Hort 1010 HOME LANDSCAPE GARDENING AND DESIGN (5151)**

13 lessons — \$46.50 — 3 degree credits — text price \$20-22 — Phillips

Working knowledge of propagation and culture of common landscape materials: turf, flowers, trees, and shrubs. Principles and practices of gardening; prepared for beginners, but also valuable for the advanced or experienced gardener. Textbook assignments and home projects in propagating plants for the garden. Topics include: planting, transplanting, seeds, soils, fertilizers, preparing beds and planting areas, selecting a good garden site, controlling insects and diseases, weeding, watering, cultivating, pruning, tools and equipment. Also discusses varieties of annuals, perennials, bulbs, and roses recommended for northern gardens.

## Hospital Administration

See Special Courses and Programs (General Information)

## How to Study

See Study Skills

## Humanities

### **Hum 1001 FROM ENLIGHTENMENT TO REVOLUTION: OUR 18TH CENTURY HERITAGE (T521)**

\$77.50 — 5 degree credits — Lowry

Explores culture of 18th century Europe and its impact on colonial America. Investigates important works of philosophy, literature, music, art, and architecture. **This course will be broadcast on KTCA-TV Channel 2, Fall 1976.**

### **Hum 1101 HUMANITIES IN THE MODERN WORLD I (5201)**

16 lessons — \$46.50 — 3 degree credits — text price \$11-14 — 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. You may enroll immediately in the 3-credit course described above or write for information on the new course.

### **Hum 1002 HUMANITIES IN THE MODERN WORLD II (5202)**

16 lessons — 5 degree credits — \$77.50 — text price \$10-12 — Bisztray

Industrial Revolution, romanticism, socialism, individualism; Smith, Malthus, Carlyle, selected documents of romanticism, Zola, Ibsen, Dostoevsky, Tolstoy. **This course is now in preparation; please inquire before enrolling.**

### **Hum 1103 HUMANITIES IN THE MODERN WORLD III (5203)**

16 lessons — \$46.50 — 3 degree credits — text price \$17-19 — Kanun

The impact of science — especially Darwinism — on philosophy, religion, and the prevailing values of western Europe from about the middle of the 19th century to the opening of World War I. Intellectual roots of existentialism. Writings by influential scientists and philosophers of the age. Note: A 5-credit revision of this course is now in progress. You may enroll immediately in the 3-credit course described above or write for information on the new course.

### **Hum 1104 HUMANITIES IN THE MODERN WORLD IV (5204)**

16 lessons — \$46.50 — 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 — \$77.50 — 5 certificate credits — text price \$15-17 — Gunderson

Efficient plant operation and accurate wage determination; the skeletal structure of methods analysis, process analysis, operation analysis, micromotion study, motion study problems; the skeletal structure of time study, breakdown of job into elements, determination of time consumed, job rating; personal, fatigue, and delay allowances; timing techniques for typical industrial operation; time study problems.

### **IEOR 0221C INDUSTRIAL PLANT LAYOUT (3117)**

27 lessons — \$77.50 — 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 — \$46.50 — 3 certificate credits — text price \$11-13 — Hundley

A general discussion of basic principles of supervision in the office and factory. Survey of principles for the handling of day-to-day problems of supervisors with emphasis on human relations aspects of such problems. Deals with selection, induction, and training of new employees, role of the supervisor, communication, employee appraisal, giving orders, handling grievances, discipline, and employee morale.

### **IR 3002 SYSTEMS OF INDUSTRIAL RELATIONS: LABOR MARKETING (2252)**

12 lessons — \$62 — 4 degree credits — text price \$24-26 — Estenson

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 — \$62 — 4 degree credits — text price \$15-17 — Gomez

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.

## Course Descriptions

### Insurance

#### **Ins 3100 RISK MANAGEMENT AND INSURANCE (2353)**

20 lessons — \$62 — 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 control, and insurance — and the conditions under which they should be used. How to select and deal with an insurer. Public policy issues — government regulation, social insurance, and automobile insurance problems.

#### **Ins 3210 ECONOMIC AND SOCIAL SECURITY (K211)**

See Econ 5534. Course available for credit in either Economics or Insurance.

### Journalism and Mass Communication

Journalism majors should follow requirements for pre-journalism major as shown in **College of Liberal Arts Bulletin**.

#### **Jour 1001 INTRODUCTION TO MASS COMMUNICATIONS (3701)**

6 lessons — \$31 — 2 degree credits — text price \$7-9 — Sim

The nature, functions, and responsibilities of communications media and agencies from the point of view of professional journalists. News, opinion, entertainment, and persuasion functions; specialized communication; aspects of advertising. (Prerequisite: Freshman Composition or equivalent)

#### **Jour 1101 REPORTING (3714)**

16 lessons — \$77.50 — 5 degree credits — text price \$12-14 — Sim

Fact gathering and journalistic writing. Many exercises in straight news and types of news features. Problems in judgment and handling of news and feature values, interviews. (Prerequisite: Jour 1001)

#### **Jour 1201 PRINCIPLES OF ADVERTISING (3715/T371)**

\$62 — 4 degree credits — Thompson

Survey course covering basic theory of advertising, its social and economic effects, its role in marketing products, ideas, and services; the media of advertising, their uses, strengths and limitations; basic concepts in the preparation of advertisements; budgeting and management of campaigns; forms of regulation. **This course will be available as a correspondence course and will be broadcast on KTCA-TV Channel 2, Spring 1977.**

#### **Jour 5501 COMMUNICATION AND PUBLIC OPINION I (3792)**

12 lessons — \$68 — 4 degree credits — text price \$9-11 — Dennis

A study of theories of communication, public opinion, and attitude change as well as an examination of research findings about communication, opinion, and persuasion and some of the methods and methodological problems with which consumers of such research should be familiar.

#### **Jour 5601 HISTORY OF JOURNALISM (3791)**

12 lessons — \$68 — 4 degree credits — text price \$20-22 — Emery

Development of American newspapers and periodicals from beginnings in Europe to present day; rise of radio and television; relation of communications developments to political, economic, and social trends; current press-government credibility crises.

#### **Jour 5721 MASS MEDIA IN A DYNAMIC SOCIETY (3793)**

12 lessons — \$68 — 4 degree credits — text price \$12-14 — Dennis

Economic, political, and social determinants of character and content of mass communications. Patterns of operations, effect on content, and relative social utility. Theory of mass society.

## Latin

See Classics

## Law

See Business Law

## Library Science

The courses in library science do not earn credit in the University of Minnesota Library School, which is a graduate program leading to a Master's degree. The credits are acceptable in other undergraduate colleges at Minnesota, usually as electives. Most states will accept the credits for teacher certification. If you have questions about the transfer of credits, write to your state's Department of Education or similar agency. Because of the difficulties in shipping the texts that must be loaned with these courses, no registration can be accepted from students overseas.

### Lib 1401 DESCRIPTIVE CATALOGING (7152)

16 lessons — \$46.50 — 3 degree credits — text price \$19-21 — Samansky

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 — \$46.50 — 3 degree credits — text price \$32-34 — Samansky

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 3075 SALES MANAGEMENT (2523)

14 lessons — \$62 — 4 degree credits — text price \$13-15 — Lewis

Management of the personal selling function, including sales organization; selection, training, compensation, motivation, supervision and control of the field sales force; sales forecasting; sales budgets; sales and cost analysis. Case materials used. **This course is now in preparation; please inquire before enrolling.**

### Mktg 3098 CONSUMER BEHAVIOR (2522)

14 lessons — \$62 — 4 degree credits — text price \$14-16 — Walker

Applications of the behavioral sciences to understanding human behavior in the marketplace. Topics include perception, learning, attitude theory and measurement, motivation, personality, social and cultural influences, family decision making, social influence processes, consumer decision-making strategies, managerial implications of consumer research, and "consumerism."

## Course Descriptions

### 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.

Note: In addition to the following noncredit courses in mathematics, certain courses available through the high school program of the Department of Independent Study also fulfill entrance requirements of I of T and other colleges. For Independent Study courses in high school mathematics, write for the bulletin, **Independent Study for High School Students**, University of Minnesota, Department of Independent Study, 25 Wesbrook Hall, Minneapolis, MN 55455.

#### **Math 0001 BASIC MATHEMATICS REVIEW I (7201)**

16 lessons — \$46.50 — no credit — text price \$8-10 — Giese

A thorough review of arithmetic and a good foundation in elementary algebra, including the fundamental operations involving positive and negative numbers, fractions, the solution of simple equations and fractional equations, exponents, symbols of grouping, special products and factoring, and simplification of fractional expressions.

#### **Math 0002 BASIC MATHEMATICS REVIEW II (7203)**

16 lessons — \$46.50 — no credit — text price \$9-11 — 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 — \$77.50 — 5 degree credits — text price \$10-12 — Giese

Concepts and manipulative skills of algebra necessary for student to compete in a college algebra course. Topics include: discussion of the real number system, special products and factoring, exponents and radicals, linear equations in one and two variables, quadratic equations in one variable, progressions, inequalities, variation, and logarithms. (Prerequisite: Math 0002 or equivalent)

#### **Math 1111 COLLEGE ALGEBRA AND ANALYTIC GEOMETRY (7215)**

27 lessons — \$77.50 — 5 degree credits — text price \$8-10 — Ekstrand

Functions and graphs, quadratic equations in one and two variables, progressions, complex numbers, inequalities, theory of equations, permutations and combinations, binomial theorem probability, mathematical induction, determinants. (Prerequisite: Math 0009 or GC 1445 or high school higher algebra, and Math 1008 or high school trigonometry)

#### **Math 1142 INTRODUCTION TO CALCULUS (7240)**

16 lessons — \$77.50 — 5 degree credits — text price \$12-14 — Varadachari

For students in pre-business administration, pre-pharmacy, and others requiring a minimal amount of calculus; students who plan to take several quarters of mathematics should register for the sequence Math 1211-1221-1231. (Prerequisite: Math 1111 or Math 1131 or Math 1201 or mathematics placement score)

#### **Math 1211 ANALYSIS I (7224)**

16 lessons — \$77.50 — 5 degree credits — text price \$12-14 — Varadachari

Analytical geometry and calculus of functions of one variable.

### **Math 1221 ANALYSIS II (7225)**

16 lessons — \$77.50 — 5 degree credits — text price \$12-14 — Varadachari  
A continuation of Analysis I.

### **Math 1231 ANALYSIS III (7226)**

16 lessons — \$77.50 — 5 degree credits — text price \$12-14 — Varadachari  
A continuation of Analysis II. Infinite series and power series.

### **Math 3066 DIFFERENTIAL EQUATIONS (7296)**

16 lessons — \$62 — 4 degree credits — text price \$10-12 — Marchand  
Equations of first order, singular solutions; linear equations with constant coefficients, simultaneous equations, integration in series. (Prerequisite: Math 1231 or equivalent)

### **Math 3211 ANALYSIS IV (7234)**

16 lessons — \$77.50 — 5 degree credits — text price \$12-14 — 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)**

16 lessons — \$77.50 — 5 degree credits — text price \$11-13 — Varadachari  
Vectors, systems of linear equations, matrices, determinants, bases, eigenvalues. Linear differential equations and systems with constant coefficients, initial value problem and general solution, variation of parameters for inhomogeneous equations. (Prerequisite: Math 1231 or equivalent)

### **loft 3501 MEASUREMENT AND THE METRIC SYSTEM (7204)**

10 lessons — \$62 — 4 degree credits — text price \$8-10 — Wenberg  
Brief history of measurement systems. Discussion of the importance of measurement in various technological and communicative aspects of work and everyday life. Introduction to the international metric system (SI). Investigation of particular aspects of metric transition in the United States compared with current experience in other countries. The above is a bulletin description. Mostly, you will be given a series of learning experiences through which you may become personally aware of the implications to you of U.S. conversion to the worldwide SI system of metric measurement. An investigation of your own choosing will let you develop and apply your understanding of SI and evaluate the impact of metric transition on your life.

## **Motion and Time Study Engineering**

See Industrial Engineering/Operations Research

## **Music**

### **Mus 1501/1511 MATERIALS AND STRUCTURE OF MUSIC I/EAR TRAINING AND SIGHT SINGING I (7311)**

12 lessons (90-minute cassettes) — \$62 — 4 degree credits — text price \$19-21 — tape price \$38.50 (rent or purchase) — Oberg

An integrated course in music theory incorporating sight singing, spelling, writing, and playing of melodic and harmonic patterns. Topics include notation, aural perception, playing of rhythms in simple and compound time, and the basic rules for four-voice part writing. Can be taken by music and music education majors (for whom it is required) and by high school students or adults who wish to augment their private music study, enhance their participation in a musical ensemble, or increase their understanding and listening enjoyment of music. Also covers the rudiments of music required of all elementary education majors. Much of the course material is on audio tapes rather than in the traditional written format. See **Tapes and Tape Recorders** for information on renting audio cassettes and cassette recorders.

## Course Descriptions

### **Mus 5439 KEYBOARD SIGHT READING (T732)**

Video Cassette Course — \$68 — 4 degree credits — Guhl and Pernun

For keyboard teachers and performers who want to improve their own sight reading and that of their students. Ten video cassette programs give specific examples and commentary; reading materials in the study guide will help the teacher to understand the nature of the reading process and to implement this process in teaching and performing. Included also are guidelines and a resource list of sight reading materials. **Enrollment restricted to students who can view the cassettes at one of these locations:** 1. the Learning Resources Center, Walter Library, Minneapolis Campus; 2. MacPhail Center for the Performing Arts, 1128 LaSalle Avenue, Minneapolis; 3. University of Minnesota, Rochester Center, 2120 East Center St., Bldg. 4, Rochester, MN 55901. **This course is now in preparation; please inquire before enrolling.**

### **Mus 5711 AMERICAN POPULAR MUSIC (T731)**

Video Cassette Course — \$68 — 4 degree credits — no required texts — study guide with one audio cassette \$7 — Riedel

Examines music which is significant for our community life, with emphasis on ethnic and black music, social dance and theatre music, parlor songs, barber shop quartets, civil war music, and technology of music. Ten one-hour programs available on video cassettes. **Enrollment restricted to students who can view the cassettes at the Learning Resources Center, Walter Library, Minneapolis Campus.**

### **Mus 5950 TOPICS IN MUSIC: MUSIC APPRECIATION (K732)**

Audio Cassette Course — \$68 — 4 degree credits — text price \$14-16 — 12 cassettes \$17.32 (rent or purchase) — Sutton

Analyzes music in the repertory of our culture — forms and styles from the 17th century to the present. Discusses the basic musical elements of rhythm, tonality, melody, and texture. The course is intended to increase the listener's musical vocabulary and skills in analyzing and appreciating musical forms such as: symphonies, concertos, chamber, keyboard and choral music, opera and song. See **Tapes and Tape Recorders** for information on renting audio cassettes and cassette recorders.

## Norwegian

See Scandinavian Languages

## Orientation to Independent Study

See Study Skills

## Parliamentary Procedure

See Rhetoric

## Philosophy

### **Phil 1001 LOGIC (7602 and 7605)**

10 lessons — \$46.50 — 3 degree credits (or 18 lessons — \$77.50 — 5 degree credits) — text price \$11-13 — 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 \$31 fee, and complete eight more lessons and a final examination.



### **Phil 1002 PROBLEMS OF PHILOSOPHY (7604)**

15 lessons — \$77.50 — 5 degree credits — text price \$13-15 — Dana  
An examination of some important problems in epistemology and metaphysics. Epistemological questions include: What is the relation between perception and reality? Are there any innate ideas, and is anything knowable independently of experience? What is the rational foundation of belief? Is knowledge possible, or is each person's opinion ultimate? The question of whether religious beliefs are rational is investigated through an evaluation of several different efforts to show that belief in the existence of God is. The metaphysical topics are the Mind-Body problem and the problem of Free Will vs. Determinism: What does "having a mind" involve, and does the possibility that human behavior is causally determined mean that "Free Will" is a myth? The question of whether punishment of criminals can be legitimate if all behavior is causally determined is investigated. The aim of the course is to introduce the student to some of the basic concerns of philosophy and, through the study of how several important philosophers have dealt with them, to introduce him or her to the process or activity of philosophy itself.

### **Phil 1011 SCIENCE AND RELIGION (7610)**

12 lessons — \$60 — 4 degree credits — text price \$5-7 — Zanoni  
A historical and philosophical inquiry into the conflict between modern science and religion, attempting to find grounds of conflict and/or reconciliation.

### **Phil 3001 GENERAL HISTORY OF WESTERN PHILOSOPHY: GREEK PHILOSOPHY (7650)**

20 lessons — \$77.50 — 5 degree credits — text price \$12-14 — Kielkopf  
Greek philosophy, an introduction to early Western thought; emphasizes Socrates, Plato, and Aristotle.

### **Phil 3003 GENERAL HISTORY OF WESTERN PHILOSOPHY: DESCARTES THROUGH HUME (7652)**

21 lessons — \$77.50 — 5 degree credits — text price \$6-8 — Kielkopf  
Philosophical thought from Descartes through Hume. The impact of science; backgrounds of contemporary philosophical problems.

### **Phil 3004 GENERAL HISTORY OF WESTERN PHILOSOPHY: KANT THROUGH NIETZSCHE (7653)**

21 lessons — \$77.50 — 5 degree credits — text price \$9-11 — Kielkopf  
Philosophical thought from Kant through Nietzsche. Contains lessons on Hegel, Marx, Mill, Comte, Schopenhauer, and Kierkegaard.

### **GC 1355 ETHICS (7606)**

15 lessons — \$62 — 4 degree credits — text price \$5-7 — Zanoni  
The course aims at providing the student with an understanding of the development of moral thought in Western civilization and the problems generated by changing views about the nature of human beings and their behavior. The emphasis of the course is on showing how thinking clearly about the various factors in the development of moral thought in the West is relevant to contemporary moral practice. **This course is now in preparation; please inquire before enrolling.**

## Physics

### **Phys 1031 INTRODUCTION TO PHYSICS: MEASUREMENT AND APPLICATIONS (7705)**

15 lessons — \$77.50 — 5 degree credits — text price \$18-20 — 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 — \$77.50 — 5 degree credits — text price \$18-20 — 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)

## Course Descriptions

### Police Administration

#### **PoAd 0015C METHODS IN POLICE SUPERVISION (7815)**

16 lessons — \$46.50 — 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 — \$46.50 — 3 certificate credits — text price \$8-10 — Bennett  
Analysis of the current code and criminal court procedure, adaptable to other state codes 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 — \$46.50 — 3 certificate credits — text price \$11-13 — 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 understanding the total department operation as it is for those in command functions in understanding their responsibilities.

#### **PoAd 0018C METHODS OF CRIMINAL INVESTIGATION (7818)**

16 lessons — \$46.50 — 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.

### Polish

See Slavic and East European Languages

### Political Science

#### **Pol 1001 AMERICAN GOVERNMENT AND POLITICS (7903)**

16 lessons — \$77.50 — 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 — \$46.50 — 3 degree credits — text price \$13-15 — Rogers  
An introduction to world affairs. Development of the state system. The facts of power in international relations. The causes of war and the forces that make for peace. Introduction to the foreign policies of the United States, the Soviet Union, and China.

#### **Pol 1026 AMERICAN FOREIGN POLICY (7927)**

12 lessons — \$62 — 4 degree credits — text price \$10-12 — Walcott  
Goals and values in American foreign policy; traditional and post-World War II policies. The formulation and administration of foreign policy and the role of public opinion.

#### **Pol 1031 AMERICAN PUBLIC POLICY (7931)**

14 lessons — \$62 — 4 degree credits — text price \$12-14 — Eyestone  
How American public policies are made — the development of issues, actors, and decision techniques; evaluation of policies. Analysis of current issues in the areas of civil rights, environmental concerns, foreign policy, welfare, and labor, business, and the economy. Emphasis throughout on the policy process and on alternative solutions to current policy problems, primarily at the national level.

## Course Descriptions

### **Pol 5443 GOVERNMENT AND POLITICS OF THE SOVIET UNION (7955)**

14 lessons — \$68 — 4 degree credits — text price \$25-27 — 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 — \$68 — 4 degree credits — text price \$11-13 — Dodge  
Political institutions and behavior of sub-Saharan African countries in their social and cultural settings; influence of class and tribal structure; parties and elections; source and nature of ideologies; economics and social policies. (Prerequisite: 12 credits in social sciences or consent of instructor)

### **Pol 5454 CHINESE GOVERNMENT AND POLITICS (7954)**

12 lessons — \$68 — 4 degree credits — text price \$5-7 — Dodge  
Analysis of the political system of Communist China with particular emphasis on Maoist ideology; party organization and behavior; developmental economic and social policies; foreign policy goals and strategies. (Prerequisite: 12 credits in social sciences or consent of instructor)

### **Pol 5503 THE CONSTITUTION: WHAT IT IS TODAY (T792)**

\$68 — 4 degree credits — Chase  
The focus of the course is on ascertaining the meaning of the United States Constitution. Particular attention will be paid to questions pertaining to the power of the Supreme Court, the President, and Congress, as well as to civil liberties and individual rights. **This course will be broadcast on KTCA-TV Channel 2, Winter 1977.**

### **Pol 5737 POLITICAL PARTIES (7987)**

14 lessons — \$68 — 4 degree credits — text price \$12-14 — Eyestone  
Party activities in the United States — recruiting, nominating, and campaigning. Parties in power. Party organization and membership, party identification, third parties, and independents. Party reform and the functions of parties. Attention throughout to the impact of parties on democratic government. (Prerequisite: Pol 1001 or consent of instructor)

### **GC 1222 PEOPLE POWER: THE WORLD OF PRACTICAL POLITICS (T261)**

Video Cassette Course — \$46.50 — 3 degree credits — text price \$5-7 — study guide \$4 — Oldendorf  
Demonstrates through case histories and comments from experienced politicians how the individual can influence the political system. Revealing politics "as it is," the course emphasizes ways in which a citizen can become effectively involved in political action and can make his participation count. Topics include: individual and group action, precinct caucuses, lobbying, political parties, and alternative action. Ten half-hour programs available on video cassettes. **Enrollment restricted to students who can view the cassettes at the Learning Resources Center, Walter Library, Minneapolis Campus.**

### **GC 3234 POWER AND THE INDIVIDUAL (K791)**

\$62 — 4 degree credits — Dodge and Kane  
An interdisciplinary study of power using political science and literature, with emphasis on 20th century definitions and redefinitions. Topics to be considered include: presidential authority, legitimacy, citizen power and pressure groups, power and violence, and the process of power. **This course will be available on KUOM Radio 770, Fall 1976 and as an audio cassette course, Winter 1977.**

## **Psychological Foundations of Education**

See Education

## **Psychology**

Also see Child Psychology

## Course Descriptions

### **Psy 1001 GENERAL PSYCHOLOGY (8101)**

18 lessons — \$77.50 — 5 degree credits — text price \$14-16 — 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, third quarter freshman with a B average, or consent of instructor)

### **Psy 1911 PSYCHOLOGY AND RELIGION (T811)**

Video Cassette Course — \$62 — 4 degree credits — text price \$11-13 — study guide \$4.50 — Bradshaw

Explores religiousness from a psychological point of view. The opinions of major theorists on topics of belief, feeling, ritual, conversion, mysticism, faith healing, religious development, and related issues will be discussed. Emphasis is on helping the student understand his/her own and other people's religious expression, or lack of it, in the context of what is known about psychological processes likely to be involved in religious behavior. Ten half-hour programs available on video cassettes. Enrollment restricted to students who can view the cassettes at the Learning Resources Center, Walter Library, Minneapolis Campus. Students may not receive credit for both Psy 1911 and Psy 3911.

### **Psy 3101 INTRODUCTION TO PERSONALITY (8188)**

15 lessons — \$62 — 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 — \$62 — 4 degree credits — text price \$20-22 — Dorset

The field of abnormal psychology. Etiologies of behavioral disorders; discussion of available treatments. (Prerequisite: 5 credits introductory psychology)

### **Psy 3911 PERSONALITY AND RELIGION (8196)**

15 lessons — \$62 — 4 degree credits — text price \$14-16 — Bradshaw

This course studies religious behavior with a topical approach. Areas covered include origins and development of religiousness, religious practices, doubt and belief, guilt and alienation, self-management, altered states of consciousness, social influences, life crises, transcendence, and religious maturity. (Prerequisite: 5 credits introductory psychology or consent of instructor)

Students may not receive credit for both Psy 1911 and Psy 3911.

## Recreation, Park, and Leisure Studies

### **Rec 1520 ORIENTATION TO LEISURE AND RECREATION (8410)**

16 lessons — \$77.50 — 5 degree credits — text price \$33-35 — Chapman

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 of recreation, leisure, and parks.

### **Rec 5140 RECREATION PROGRAMMING (8490)**

14 lessons — \$85 — 5 degree credits — text price \$20-22 — Chapman

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 — \$51 — 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)**

11 lessons — \$51 — 3 degree credits — text price \$9-11 — Chapman  
Introductory principles of therapeutic recreation. Types of hospitals and their patients' activities programs. Philosophy and purposes of institutional recreation; program content. Beginning methods in the leadership and supervision of recreation programs for the ill and disabled.

## **Religion**

See Classics; Humanities; Philosophy; Psychology

## **Rhetoric**

Also see Study Skills

### **Rhet 1226 PARLIAMENTARY PROCEDURE (7425)**

6 lessons — \$15.50 — 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)**

15 lessons — \$77.50 — 5 degree credits — text price \$9-11 — Lahti  
For beginners with little or no previous knowledge of Finnish. Stresses fundamentals of grammar, the facility to read and write easy Finnish.

### **Norwegian**

#### **Nor 1101 BEGINNING NORWEGIAN I (6301)**

27 lessons — \$77.50 — 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 — \$77.50 — 5 degree credits — text price \$7-9 — Gundersen  
Continuation of Nor 1101, but with primary emphasis on reading and writing. Short stories and folk tales are used for reading assignments. (Prerequisite: Nor 1101 or equivalent)

### **Swedish**

#### **Swed 1101 BEGINNING SWEDISH I (6901)**

27 lessons — \$77.50 — 5 degree credits — text price \$6-8 — McKnight  
Grammar and composition; selected readings in easy prose and verse.

## Course Descriptions

# Slavic and East European Languages

## Polish

### **Pish 1101 BEGINNING POLISH I (6401)**

27 lessons — \$77.50 — 5 degree credits — text price \$16-18 — Kondy  
For beginners with no previous knowledge of Polish. Covers the fundamentals of grammar, the facility to read, understand, and write simple Polish.

## Russian

### **Russ 1101 BEGINNING RUSSIAN I (6603)**

17 lessons — \$77.50 — 5 degree credits — text price \$12-14 — audio tape price \$7.25 — Prokopov  
Provides a reading and writing knowledge of the Russian language. Acquaints students with Russian script, pronunciation, and essentials of grammar; translations from Russian and into Russian. See **Tapes and Tape Recorders** for information on securing a cassette recorder.

### **Russ 1102 BEGINNING RUSSIAN II (6604)**

17 lessons — \$77.50 — 5 degree credits — text price \$12-14 — audio tape price \$8.75 — Prokopov  
Continuation of Russ 1101: reading, writing, pronunciation, and grammar. (Prerequisite: Russ 1101) See **Tapes and Tape Recorders** for information on securing a cassette recorder.

### **Russ 1221 SCIENTIFIC RUSSIAN I (6624)**

27 lessons — \$77.50 — 5 degree credits — text price \$5-7 — Prokopov  
An introduction to the basic grammar and structure of the Russian language, using a vocabulary common to various sciences. Provides the ability to read Russian scientific texts.

### **Russ 1222 SCIENTIFIC RUSSIAN II (6625)**

12 lessons — \$31 — 2 degree credits — text price \$4-6 — Prokopov  
Directed reading and translation of Russian scientific texts in a field of the student's choice. Students may satisfy the graduate language requirement by passing Russ 1222 with a grade of B. (Prerequisite: Russ 1221)

### **Russ 1223 SCIENTIFIC RUSSIAN III (6626)**

12 lessons — \$31 — 2 degree credits — no required text — Prokopov  
Continuation of Russ 1222: reading and translating scientific texts. (Prerequisite: Russ 1222)

# Social Studies (General College)

### **GC 1071 INTRODUCTION TO AGING (8638)**

12 lessons — \$62 — 4 degree credits — text price \$16-18 — Smith  
Behavioral components, clinical aspects, and social organization of aging.

### **GC 1283 PSYCHOLOGY OF HUMAN DEVELOPMENT (K821)**

Audio Cassette Course — \$46.50 — 3 degree credits — text price \$11-13 — 15 audio cassettes \$23.40 (rent or purchase) — Latts

Focuses on growth and development of the individual from conception through adolescence. Aspects of development emphasized include physical, motor, social, emotional, and psychological growth. Integration of facets of development is made in order to understand the human being as a complex organism functioning in a complex environment. Since the individual is born into and grows up in a family, discussion is sometimes focused on the family as the main environmental factor in early development of the individual. See **Tapes and Tape Recorders** for information on renting audio cassettes and cassette recorders.

### **GC 1631 THE HELPING PROCESS IN THE SOCIAL SERVICES (8631)**

12 lessons — \$46.50 — 3 degree credits — text price \$8-10 — Bloom  
Dynamics of working effectively with people. Focuses on actual procedure of the helping process; included development of frame of mind or attitude to help students communicate with others in more helpful ways. Also intended to help students develop beginning skills in the helping professions as well as to evaluate their own interests and potential in the field. (Prerequisite: Concurrent registration in GC 1637 or field experience in a human services setting)

### **GC 1637 SUPERVISED WORK EXPERIENCE IN THE SOCIAL SERVICES (8637)**

10 lessons — \$62 — 4 degree credits — text price \$2-4 — audio tape price \$4-6 — Stewart

Course objective is to gain practical experience in developing goals and objectives, specific steps of implementation and evaluation procedures for the individual learning process of the student and his competence in working with others. The student will be jointly supervised by his University instructor and a supervisor in his area of work or "awareness" experience. Students must submit a description of their proposed experience before enrolling. May be repeated for credit. (Prerequisite: GC 1631 or concurrent registration) See **Tapes and Tape Recorders** for information on securing a cassette recorder.

## Social Work

Also see Social Studies (General College)

### **SW 3001 INTRODUCTION TO AMERICAN SOCIAL AND COMMUNITY SERVICES (8690)**

15 lessons — \$77.50 — 5 degree credits — text price \$15-17 — 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 (8602)**

13 lessons — \$62 — 4 degree credits — text price \$13-15 — Parilla

A general introduction to a scientific analysis of social interaction, social structure, and socialization. Topics include: socialization and language, stratification, deviance and conformity, social integration and social change, and collective behavior. General theoretical perspectives will be examined and the conflict-consensus issue discussed. Emphasis will be placed on application of concepts and theories to everyday life.

### **Soc 1002 AMERICAN COMMUNITY (8604)**

12 lessons — \$62 — 4 degree credits — text price \$14-16 — Thiel

Sociological analysis of modern American society. Distribution of population, urban-rural differences, social factors in business systems, occupational groups, determination of social status, minority group adjustment.

### **Soc 3101 ELEMENTS OF CRIMINOLOGY (8654)**

14 lessons — \$62 — 4 degree credits — text price \$10-12 — Chein

A general introduction to the study of crime and its relationship to society, including: an in-depth look at the criminal justice system in America (the police, the courts, the prisons); an examination of historical and contemporary theories of criminal behavior; and a look at several types of crime and the roles they play in society.

### **Soc 5201 INTRODUCTION TO SOCIAL PSYCHOLOGY (8671)**

13 lessons — \$68 — 4 degree credits — text price \$13-15 — Parker

An intensive examination of the major issues in social psychology. Covers substantive areas of socialization and language, personality, person perception, interpersonal attraction, prejudice, attitudes, social influence, prosocial behavior and aggression, small groups, and collective behavior. Emphasis will be placed on application of theories and concepts to everyday life. Three major theoretical perspectives (symbolic interactionism, exchange, and cognitive consistency) are used to organize course material.

## Course Descriptions

### **Soc 3501 THE FAMILY (8681)**

16 lessons — \$62 — 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 — \$68 — 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)

### **Soc 5956 SOCIOLOGY OF DEATH (T861)**

Video Cassette Course — \$68 — 4 degree credits — text price \$18-20 — study guide \$4 — Fulton

Issues and problems that mortality presents in contemporary society. Topics covered include: death in American society; society's denial of death; the dying patient; grief; social recuperation; the funeral; death and the child; youth and suicide; the role of care-giving professionals; ethical issues. Ten one-hour programs available on video cassettes. **Enrollment restricted to students who can view the cassettes at the Learning Resources Center, Walter Library, Minneapolis Campus.**

## Spanish

### **Span 0221 SPANISH FOR GRADUATE STUDENTS (6817)**

16 lessons — \$46.50 — 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 examination in Spanish.

### **Span 1101 BEGINNING SPANISH I (6801)**

22 lessons — \$77.50 — 5 degree credits — text price \$11-13 — 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 — \$77.50 — 5 degree credits — text price \$12-14 — Cuneo  
Continues the conversational and cultural training begun in Span 1101. Completes the study of the essentials of Spanish grammar needed by beginning Spanish students. Emphasis on expanding Spanish vocabulary and question-and-answer composition in Spanish. (Prerequisite: Span 1101 or equivalent)

### **Span 1103 BEGINNING SPANISH III (6803)**

18 lessons — \$77.50 — 5 degree credits — text price \$7-9 — Cuneo  
A review and more detailed study of the principles of written Spanish. More emphasis on composition. Reading a short play. Study of the Spanish-speaking nations. (Prerequisite: Span 1102 or equivalent)

### **Span 1104 INTERMEDIATE SPANISH (6825)**

18 lessons — \$77.50 — 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 — \$77.50 — 5 degree credits — text price \$6-8 — Cuneo  
Concentrates on developing reading skills, expanding vocabulary, and improving written expression. Materials include a textbook containing articles from newspapers and magazines and a novel. (Prerequisite: Span 1104)



### **Span 1502 CULTURES AND CIVILICATIONS OF LATIN AMERICA: PRE-COLUMBIAN TIMES TO 1825 (6843)**

14 lessons — \$62 — 4 degree credits — text price \$11-12 — Cuneo

Provides an opportunity to study and evaluate the cultures and civilizations of Latin America from pre-Colombian times, through the discovery of America by the Spaniards and its consequent explorations, conquest and colonization (15th to 18th centuries), to the movements of independence from Spain, Portugal, and France in the first quarter of the 19th century. It is intended to illuminate the problems and revolutionary changes of modern Latin America, which are a part of its complementary course, Span 1503. Readings in English. Knowledge of Spanish not necessary. Not to be used for Spanish or Portuguese major credit. May be used to satisfy Route II requirements.

### **Span 1503 CULTURES AND CIVILIZATIONS OF LATIN AMERICA: 1825 TO 1930 (6844)**

12 lessons — \$62 — 4 degree credits — text price \$15-18 — Cuneo

Completes the study and evaluation of the social, political, economic, and cultural transformation of Latin America from 1825 to 1930; from the Age of the "Caudillos" to contemporary social reform and revolution in the Tropical Plantation Zone, in the Mestizo Zone, in the European Commercial Zone, in the Indian Subsistence Zone, and in the Zone of Little Change. Readings in English. Knowledge of Spanish not necessary. Not to be used for Spanish or Portuguese major credit. May be used to satisfy Route II requirements. **This course is now in preparation; please inquire before enrolling.**

## Statistics

See Education

## Study Skills

### **SSk 0012 GUIDED READING (3901)**

12 lessons — \$31 — no credit — no required text — Klohn

Offers a systematic plan of reading to help the average reader become better informed on subjects of current interest, such as science, art, history, biography. Instructions are provided on how to get the most from reading and how to discuss with others what one has read. Books may be borrowed from the University libraries.

### **SSk 0013 SELECTING BOOKS FOR CHILDREN (3902)**

12 lessons — \$31 — no credit — text price \$11-13 — Klohn

An introductory course for parents, teachers, and others interested in guiding children's reading. It surveys the field of children's literature from preschool age through the teens.

### **PO 1001 HOW TO STUDY (3801)**

6 lessons — \$31 — 2 degree credits — text price \$15-17 — audio tape price \$4-6 — 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. However, grades are included in the overall grade point average.)

### **Rhet 1147 EFFICIENT READING (3947)**

9 lessons — \$46.50 — 3 degree credits — text and materials \$70 — Brown

Designed to increase reading rate, comprehension, and vocabulary. Includes the use of cassette tapes for instruction and pacing activities. Useful for anyone who wants to achieve and maintain superior reading improvement. Not a remedial course. See **Tapes and Tape Recorders** for information on securing a cassette recorder.

## Course Descriptions

### UC 1201 ORIENTATION TO INDEPENDENT STUDY: ASKING QUESTIONS (3811)

4 lessons — \$46.50 — 3 degree credits — text price \$5-6 — J. Johnson

A module designed to provide both a structure for asking and examining questions and a broad theoretical framework relating to the question-asking approach to learning. Emphasizes the influence of media, "technocracy," and change on question-asking behavior. May be taken on S/N basis only.

### GC 1404 VOCABULARY BUILDING (4002)

10 lessons — \$46.50 — 3 degree credits — text price \$9-11 — Kurak

A course designed for those who want to increase their active (speaking, writing) and passive (reading, listening) vocabularies by a variety of means. The lessons include drill in Latin and Greek word parts, practice in the use of vocabulary in context, and listening exercises on cassette tapes. Grades are based on a series of quizzes and a final exam.

## Theatre Arts

### Th 0001C INDEPENDENT PLAYWRITING (4080)

16 lessons — \$46.50 — no credit — no required text — Weinberg

Specifically designed for advanced students. Student is given complete freedom. Plays in any stage of development will receive detailed criticism. Course work consists of two full-length plays or approximately the same amount of writing made up of shorter dramatic forms. (Prerequisite: Consent of instructor)

### Th 5115 PLAYWRITING (4077)

14 lessons — \$68 — 4 degree credits — text price \$1-3 — Weinberg

Reading assignments as an introduction to dramatic form and content. Practice in writing dramatic plots, characters, themes, and dialogue. Writing exercises will include scenario, rough draft, and final revision of a one-act play (approximately 15 typed pages or 30 minutes in playing time). (Prerequisite: Th 1101 or equivalent and consent of instructor)

### Th 5186 HISTORY OF THE AMERICAN THEATRE (K401)

Audio Cassette Course — \$68 — 4 degree credits — text price \$14-16 — 11 audio cassettes \$18.46 (rent or purchase) — Nolte

Examines the theatre from colonial days to the present as a mirror of our society. Playwrights, performers, and productions are seen in the context of our cultural, social, and political life as America celebrates its 200th birthday. See **Tapes and Tape Recorders** for information on renting audio cassettes and cassette recorders.

### Th 5186 HISTORY OF THE AMERICAN THEATRE (T401)

Video Cassette Course — \$68 — 4 degree credits — text price \$14-24 — study guide \$4 — Nolte

Same as above; ten half-hour programs available on video cassettes. **Enrollment restricted to students who can view the cassettes at the Learning Resources Center, Walter Library, Minneapolis Campus.**

## Women's Courses

### WOMEN: IS ANATOMY DESTINY? (8802)

5 lessons — \$15.50 — no credit — text price \$2-4 — E. Reed

Covers the material in the text **Our Bodies, Ourselves**. The lessons are on the basic biology of women (menstruation, childbirth, contraception and abortion, menopause) and also on the attitudes of women toward themselves and toward others. The objective is twofold: to increase the student's information about the biology of women and to raise the student's consciousness in regard to women and their sexuality.

**WOMEN AND DRUG DEPENDENCY (8803)**

8 lessons — \$31 — 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 1005 INTRODUCTION TO WOMEN'S STUDIES (T881)**

Video Cassette Course — \$62 — 4 degree credits — text price \$15-17 — study guide with 3 audio cassettes \$7.75 — McNaron  
Introduces several topics of basic concern to anyone trying to understand feminism. These topics include self-esteem and images of self, economics, politics, visual arts, history, religion, literature, the world of work, and the problem of multiple allegiance. The course will make tentative hypotheses about the implications of established theories and their challenges upon the lives of individual women (and men) presently and for the future. Eight programs available on video cassettes. **Enrollment restricted to students who can view the cassettes at the Learning Resources Center, Walter Library, Minneapolis Campus.**

**WoSt 1977 PSYCHOLOGICAL ENVIRONMENT OF WOMEN (K885)**

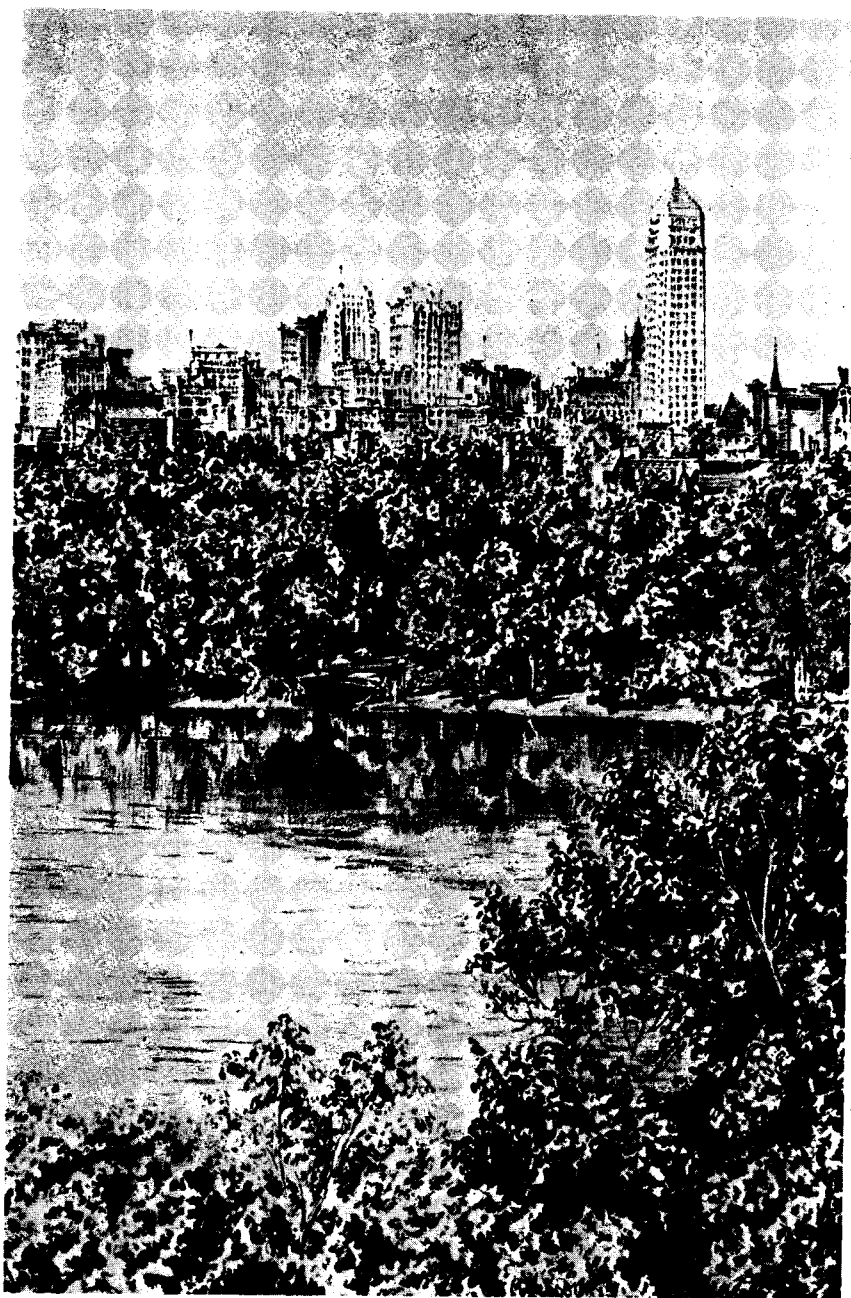
Audio Cassette Course — \$62 — 4 degree credits — text price \$44-46 — 12 audio cassettes \$19.76 (rent or purchase) — Faunce  
An examination of behavioral and social science principles and theories which have a unique application to the development, growth, and behavior of women. See **Tapes and Tape Recorders** for information on renting audio cassettes and cassette recorders.

**WoSt 3302 WOMEN AND POLITICS (K881)**

Audio Cassette course — \$62 — 4 degree credits — text price \$17-19 — 15 audio cassettes \$24.70 (rent or purchase) — Arnaud  
This course deals with the relationship of woman to her political culture and structures. Across cultures and time, women have had certain political roles closed to them. As a separate subgroup as seen by male politicians, women have also been the recipients of special political legislation and policy. We will investigate these patterns of political sexual discrimination in theory and in practice. Our goal is the achievement of a deeper understanding of the status of women in contemporary societies. See **Tapes and Tape Recorders** for information on renting audio cassettes and cassette recorders.

## May We Help You Find A Course?

The Independent Study Curriculum of the University of Minnesota offers a wide range of subject areas. Occasionally, a student may need or want a course not offered by the University of Minnesota. A publication entitled **A Guide to Independent Study Through Correspondence Instruction** lists all of the courses offered by the more than 60 member institutions of the National University Extension Association. The cost of this publication is \$1.00.



"The Skyline Beyond Loring Park"  
Crayon etching by Margaret Bradbury  
ca. 1930  
Reproduced by permission, Minnesota Historical Society

# 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.

## Audio Cassette Courses

See Ways to Earn Credit through Independent Study in center section of this bulletin.

## Counseling and Advising Services

To obtain advice by mail, write:  
Extension Counseling Office  
314 Nolte Center  
University of Minnesota  
Minneapolis, MN 55455  
Telephone (612) 373-3905

The Extension Counseling Office offers both counseling and program advising services, without fee, to all students registered or planning to register in courses offered by Continuing Education and Extension.

Program advising is available to help you determine prerequisites and academic 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

## General Information

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 \$25 is charged for students (\$50 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.

## 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	= 1-1/3 semester hours
3 quarter hours	= 2 semester hours
4 quarter hours	= 2-2/3 semester hours
4-1/4 quarter hours	= 3 semester hours
5 quarter hours	= 3-1/3 semester hours

All credits listed in this bulletin are quarter-hour credits.

The following credit designations are used in the course descriptions:

**Degree credit** may be used in a degree program. 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 advisor in their major department. (For more information, see **Degree Candidates** and **University Degree Programs**.)

**Certificate credit** may be used in appropriate Continuing Education and Extension certificate programs. Certificate credit courses are college level but do not carry degree credit and have no counterpart in day classes at the University of Minnesota. (For more information, see **Extension Certificate Programs**.)

**No credit** is given for the course although grades may be assigned. (Also see **Enrolling in Credit Courses on a Noncredit Basis**.)

When filling out the Extension Independent Study registration form, indicate in the "Credits" column the type of credit (outlined above) and the number of credits the course carries.

# 10 Ways...

**...to Earn Credit  
Through  
Independent  
Study.**



# 1

## **Correspondence Lessons**

The lesson method is based on the traditional correspondence format. When you enroll under this method, you receive a study guide that includes a list of required texts and materials, study instructions, supplementary information, and specific lesson assignments. Using the study guide, textbooks, and other materials, you complete, at your own pace, a series of assignments for evaluation by your instructor. In most courses, you must successfully complete one or more midcourse examinations and a final examination to receive credit. The lesson method is most suitable for students wishing an organized program of study that closely approximates the content and format of daytime classes at the University of Minnesota. You will be enrolled automatically under this method unless you specifically request one of the following methods.

# 23

## **Contract Alternative Credit by Examination**

These methods may be used only for courses listed in this bulletin. To enroll under contract alternative or credit by examination you should send, along with the registration form, a letter describing your background and reason for choosing this method, as well as a transcript of all college level work to Deborah Nelson, Assistant Director, Department of Independent Study, 69A Wesbrook Hall, University of Minnesota, Minneapolis, MN 55455. The Assistant Director, in consultation with an appropriate instructor, will decide either to approve your special enrollment, to recommend lesson method enrollment, or, with contract alternative, to ask that you submit a trial number of regular lessons before a final decision is reached. As with other Independent Study methods, you will receive a study guide upon acceptance of your registration, even though you may not be required to follow the lesson assignment outlined there.

### **Contract Alternative**

This method exempts you from submitting all of the lesson assignments. Instead, you propose a project that you will complete in lieu of lesson assignments. Enrollment for the contract alternative carries full tuition. To receive credit, you will be expected to pass a final examination and/or, in some other way chosen by the instructor, demonstrate your mastery of the course content.

### **Credit by Examination**

The credit-by-examination method allows you to prepare on your own for a final examination. When you pass the final examination, you receive credit for the course. You will not be allowed to submit work for your instructor's evaluation before writing the examination. This method is primarily for students who wish to earn credit for their extensive background in a specific area. It is recommended for students who have

substantial prior knowledge in a subject area. The special examination fee is \$25 (\$20 for the examination, plus \$5 for materials). You should inform the Department of Independent Study of your proctor's name, so that when you are ready to take the examination it may be sent to your proctor. Ten dollars plus \$5 for materials is nonrefundable.

# 4

## **Directed Study (Individual Study)**

This method is suggested for courses not listed in this bulletin and not available through departmental readings courses. Projects requiring cross-disciplinary study are most appropriate for this method.

Directed study lets you undertake and complete academic work of your own design. Before registering for credits through directed study, you need to secure the approval of an instructor in whose field the course is relevant. To apply for approval, please request an Individual Study Proposal form, available by writing Mary McGee, Department of Independent Study, 45 Wesbrook Hall, University of Minnesota, Minneapolis, MN 55455. The form will be mailed to you along with further instructions for directed study registration. You will have up to one year to complete your work before your registration expires.

# 5

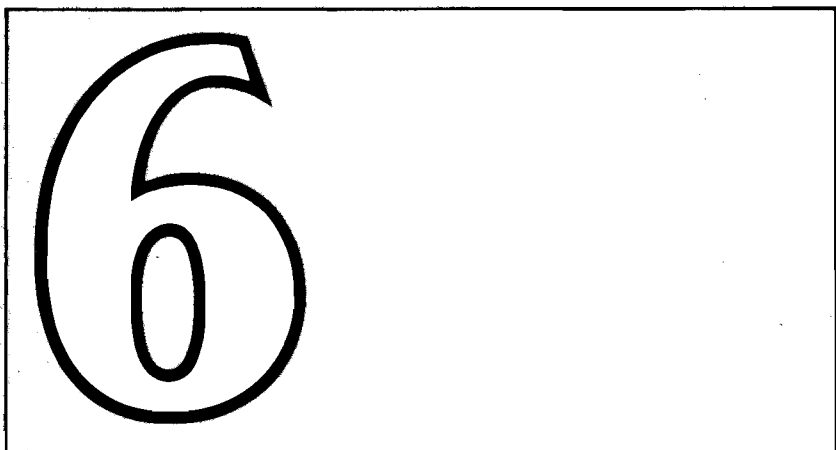
## **Special Independent Study Programs**

For groups of 20 or more students, the Department of Independent Study will, upon request, investigate the possibility of coordinating a group study program. Special Independent Study programs consist of the basic correspondence course supplemented by lectures by the instructor, video and/or audio tapes.

This method adds the dimension of group interaction without diminishing the flexibility or personal nature of Independent Study instruction. Group meetings will be arranged at a time and place convenient for the students involved.

Students wishing to discuss the possibility of special Independent Study programs should call or write Audrey Willeke, Coordinator, Department of Independent Study, 27 Westbrook Hall, University of Minnesota, Minneapolis, MN 55455; telephone (612) 376-4987.

# Media Assisted Courses



## Television Independent Study On Monday Nights Watch Television and Learn

Each Monday night two University of Minnesota credit courses are broadcast on KTCA-TV Channel 2, the Twin Cities' educational television station. The integrated program of instruction includes television presentations, textbooks, a study guide with study notes and written assignments, audio cassettes in some courses, and instructor feedback. The courses follow the University of Minnesota's academic quarter schedule. However, an extension of three months is granted to complete assignments. Call (612) 376-4925 for further information.

### Fall 1976

#### **HEREDITY AND HUMAN SOCIETY (Biol 1101-4 credits)**

The principles of heredity and their social implications. Emphasis is placed on man. Topics covered include how genes can be altered, how this alteration can cause diseases, and how genetic information is inherited. Also discussed are the genetic bases of sex, evolution, genetic engineering, and virus caused diseases.

Course Instructor: Associate Professor David Fan

TV Broadcasts: September 27-December 6, 1976, 9-9:30 p.m.

**FROM ENLIGHTENMENT TO REVOLUTION: OUR 18TH CENTURY HERITAGE (Hum 1001-5 credits)**

Explores the culture of 18th century Europe and its impact on colonial America. Investigates important works of philosophy, literature, music, art, and architecture.

Course Instructor: Assistant Professor Mark Lowry

TV Broadcasts: September 27-November 29, 1976, 9:30-10:00 p.m.

**Winter 1977**

**THE CONSTITUTION: WHAT IT IS TODAY (Pol 5503-4 credits)**

The focus of the course is on ascertaining the meaning of the United States Constitution. Particular attention will be paid to questions pertaining to the power of the Supreme Court, the President, and Congress, as well as to civil liberties and individual rights.

Course Instructor: Professor Harold Chase

TV Broadcasts: January 3-March 7, 1977, 9-9:30 p.m.

**CLASSICAL MYTHOLOGY: MYTHS AND THE MODERN WORLD (Clas 5145-4 credits)**

Investigates the successive interpretation of selected Greek and Roman myths and their influence on our literature, art, and music.

Course Instructor: Associate Professor Jackson Hershbell

TV Broadcasts: January 3-March 7, 1977, 9:30-10 p.m.

**Spring 1977**

**GEOGRAPHY OF THE TWIN CITIES (Geog 1973-4 credits)**

The development of the Twin Cities as a metropolitan regional center: evolution of the urban settlement and the regional economy; role and function of Minneapolis, St. Paul, and their neighborhoods as separate entities; future of the Twin Cities as a regional and national metropolis.

Course Instructor: Professor Fred Lukermann

TV Broadcasts: March 28-May 30, 1977, 9-9:30 p.m.

**PRINCIPLES OF ADVERTISING (Jour 1281-4 credits)**

Survey course covering basic theory of advertising, its social and economic effects, its role in marketing products, ideas and services; the media of advertising, their uses, strengths and limitations; basic concepts in the preparation of advertisements; budgeting and management of campaigns; forms of regulations.

Course Instructor: Professor Willard Thompson

TV Broadcasts: March 28-May 30, 1977, 9:30-10 p.m.

Television Independent Study is a joint effort of Extension Independent Study and University Media Resources.

# 7

## Video Cassette Courses

The following Independent Study courses consist of programs on video cassettes, a study guide, required texts and, in some cases, audio cassettes. The video cassettes can be viewed at the Learning Resources Center on the Minneapolis campus. For a description of each course, see the page number in parentheses.

### **University of Minnesota, Minneapolis Campus**

Learning Resources Center, 204a Walter Library

Hours: Open evenings and weekends; call (612) 373-2538 for exact times.

American Popular Music (p. 36)

The Dynamics of Divorce (p. 22)

History of the American Theatre (p. 46)

Introduction to Women's Studies (p. 47)

Keyboard Sight Reading\* (p. 36)

People Power: The World of Practical Politics (p. 39)

Psychology and Religion (p. 40)

Sociology of Death (p. 44)

\*This video cassette course is also available at the following viewing centers:

### **University of Minnesota, MacPhail Center for the Performing Arts**

1128 LaSalle Ave., Minneapolis, MN 55403

Call (612) 373-1925 for viewing hours.

### **University of Minnesota, Rochester Center**

2120 East Center Street, Building No. 4, Rochester, MN 55901

Call (507) 288-4584 for viewing hours.

# 8

## Radio Independent Study

The University of Minnesota public radio station KUOM 770 AM, in cooperation with the Department of Independent Study, broadcasts degree credit courses each quarter. These courses are usually broadcast from 11:15 - 12:00 noon each weekday. A study guide is especially prepared for each course to enable students to do the entire course work at home. Call 376-4925 for more information on radio course broadcast times and dates.

### Fall 1976

#### **POWER AND THE INDIVIDUAL (GC 3238-4 credits)**

An interdisciplinary study of power using political science and literature, with emphasis on 20th century definitions and redefinitions. Topics to be considered include: presidential authority, legitimacy, citizen power and pressure groups, power and violence, and the process of power.

Course Instructors: Dorothy Dodge, Professor of Political Science  
Patricia Kane, Professor of English

### Winter 1977

#### **MADNESS AND DEVIANT BEHAVIOR IN GREECE AND ROME (Clas 5005-4 credits)**

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.

Course Instructor: Gerald Erickson, Associate Professor of Classics

### Spring 1977

#### **POPULAR FICTION: DETECTIVE AND THRILLER (Engl 3920-4 credits)**

The course will focus on the conventions peculiar to these two forms of popular fiction and attempt to discover their meaning and relevance.

Course Instructor: Martin Roth, Associate Professor of English



# 9

## Audio Independent Study

After a radio course has been broadcast on KUOM, it becomes available for individual or group study on audio cassettes. The following courses use lectures on audio cassettes as the primary source of instruction. A study guide and other readings accompany each course. For information on rental of audio cassettes and audio cassette recorders see **Tapes and Tape Recorders.**

For a description of the courses listed below, see the page number indicated in parentheses.

- Economic and Social Security (p. 18)
- Food for Thought (p. 24)
- History of American Theatre (p. 46)
- Music Appreciation (p. 36)
- Parent-Child Relationships (p. 22)
- Psychological Environment of Women (p. 47)
- Psychology of Human Development (p. 42)
- Religion in Antiquity: Greek, Hellenistic (p. 15)
- Women and Politics (p. 47)

# 10

## **University Without Walls (UWW)**

The University Without Walls program is designed for people who have clear learning objectives, but who, for a variety of reasons, cannot realize their educational aims through existing programs. Students considering UWW can utilize learning derived from classroom, Independent Study courses, independent study projects, community resources, and job related activities to meet baccalaureate graduation requirements. UWW students work with a UWW program advisor, University of Minnesota faculty, and community faculty in planning and implementing an individualized degree program. UWW provides an opportunity to complete a baccalaureate degree outside the confines of the classroom or college campus.

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### **for more information on:**

**Correspondence**

**Contract Alternative**

**Credit by Examination**

**Directed Study**

**Special Programs**

**University Without Walls**

**Television**

**Radio**

**Video/Audio Cassette**

**CALL 373-3256**

**CALL 376-4925**

## Resident Credit

Degree courses described in this bulletin parallel or are equivalent to courses with the same title and course number offered in day sessions at the University of Minnesota. 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 read carefully 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 Noncredit Basis

Any course listed in this bulletin, whether offered for credit or not, may be taken on a noncredit basis by simply indicating "NC" in the "Credits" column 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 noncredit students on the same basis. You may not change from a noncredit to a credit registration once you have begun submitting lessons.

## DANTES

The Defense Activity for Non-Traditional Education Support (DANTES) was established in June 1974 to provide educational support for voluntary education programs for military organizations. Military personnel on active duty should contact their Education Officer for additional information concerning enrollment through this program.

## Degree Candidates

Also see University Degree Programs

Through Extension Independent Study, it is possible 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 wish to apply credits earned through Independent Study to a University of Minnesota degree program, you are urged to consult an academic advisor or your college office before enrolling.

## General Information

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, MN 55455, early in your planning. It is also essential to read the official bulletin of the college to which you wish to be admitted. College bulletins can be obtained by writing the Service Bureau, B-3 Morrill Hall, University of Minnesota, Minneapolis, MN 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 obtain approval from that institution before enrolling. If you wish a transcript of courses taken through Independent Study sent to another college or university, send your name, address, and the name of that institution to:

Extension Transcripts Bureau  
Window 17, 105 Morrill Hall  
University of Minnesota  
Minneapolis, MN 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.

## 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.

## Examinations

Most Independent Study courses include a final examination and one or more midcourse examinations. They are usually supervised and may be taken at the following offices or under the supervision of the following individuals.

1. Department of Independent Study, 45 Westbrook 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

## General Information

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):

Crookston: 209 Selvig Hall, 281-6510, ext. 243

Duluth: 431 Administration Building, 726-8113

Morris: 226 Community Services Building, 589-2482

Rochester: 2120 East Center Street, Building 4, 288-4584

Wadena: 411 Colfax Avenue Southwest, 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.

A Request for Examination form for each exam is included in the study guide. To take your examinations at locations other than the offices of the Department of Independent Study, you must contact the individual who will proctor your examination **before** sending the Request for Examination form to the Department of Independent Study. Examinations are mailed directly to the supervisor at his or her business location.

## Extension Certificates

Thirty-three 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 **Extension Certificate Programs** section in this bulletin.

## Faculty

Instructors for all Extension Independent Study courses are approved by the academic departments through which the courses are offered. In most cases, Independent Study instructors are faculty members of the University

## General Information

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 appears at the end of this bulletin.

## Fees

### Tuition and Out-of-State Fees

Tuition for Independent Study courses is \$15.50 per credit for Oxxx, 1xxx and 3xxx level courses and \$17 per credit for 5xxx level courses. The tuition for each course is listed with the course description. Books and materials are not included in the tuition and must be purchased separately. (See **Textbooks and Supplies**.) Students who are not residents of Minnesota must pay an addition \$3 out-of-state fee per course. 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. (A \$2 handling fee is charged for all checks returned by a bank.) You must register for Independent Study courses directly with the Department of Independent Study; Independent Study has no commercial agents in this country or abroad.

### Postage

Students pay postage on all mail sent to the Department of Independent Study. The Department pays for the return of corrected lessons at first class rates and the delivery of texts and materials at fourth class book rates. Overseas students should arrange for lessons, texts, and materials to be sent airmail by enclosing special fees with their registration. Overseas students who do not arrange for airmail postage will encounter considerable delay and possible loss of delivery. Students must assume financial responsibility for the loss of shipments of texts and materials sent overseas.

Overseas students who wish corrected lessons returned by airmail or other rapid-service mail should remit \$6.00 per course. This fee is **nonrefundable**. Overseas students who wish texts and materials sent airmail should remit \$15.00 per course in addition to tuition and the \$6.00 airmail lesson service fee. Any balance under \$1.00 remaining after postage has been paid will not be refunded. **INDICATE CLEARLY ON THE REGISTRATION BLANK THE PURPOSE FOR WHICH ADDITIONAL PAYMENT OF POSTAGE IS INCLUDED.**

Students in the United States and Canada who wish texts and supplies sent first class should remit an additional \$7.00 per course when ordering. (See **Textbooks and Supplies** for instructions on ordering.) Any balance under \$1.00 remaining after postage has been paid will not be refunded.

### Refunds

If you wish to cancel your course registration, a partial refund of your tuition may be requested, provided 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 extend your enrollment for one year with a reinstatement fee of \$10. Reinstatements should be requested before enrollment expires, and the reinstatement fee must be paid before additional lessons can be submitted. If 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.

## 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, MN 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 or education officer about possible tuition assistance for Independent Study.

**Handicapped Students** — Rehabilitation funds for the education of disabled persons are available through most State Departments of Education. Applications for aid in Minnesota should be sent to the Division of Vocational Rehabilitation, State Department of Education, Capitol Square Building, 550 Cedar Street, St. Paul, MN 55101; telephone (612) 296-5616.

**Low-Income Adult Scholarships** — Tuition assistance scholarships are available through the Continuing Education and Extension Tuition Assistance Program for low-income adults who wish to enroll in Independent Study courses. Applicants must be Minnesota residents, and eligibility for tuition assistance is based on monthly net income, number of dependents, and special expenses. For information, call (612) 376-4500 or write to the Department of Independent Study, 25 Wesbrook Hall, University of Minnesota, Minneapolis, MN 55455.

## General Information

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

For an application form, write to Extension Counseling, University of Minnesota, 314 Nolte Center, Minneapolis, MN 55455; telephone (612) 373-3905. Preference will be given to students in the fields of history, education, art, or audio-visual education.

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

Esther Friedman Remington is a valued friend of CEE. (Also see Cover Artwork section, inside front cover.)

**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, MN 55455.

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 one and one-half months of eligibility for each month or part of a month of active service after that date. Maximum period of training is 45 months, but this period is reduced by training taken under other Veterans Administration programs. For further information on registration procedures, write or telephone the Department of Independent Study, 25 Wesbrook Hall, University of Minnesota, Minneapolis, MN 55455; telephone (612) 373-3256.

**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 or more. Texts and materials ordered through the Department of Independent Study must be paid in full at the time of purchase.

Under this plan, one-third of the total tuition, plus a service charge of \$3 per course and the out-of-state fee, if applicable, is paid at the time of registration. The remaining two-thirds is payable in two equal monthly payments due 30 and 60 days after the date of registration.



## General Information

Sample payment schedules:

0xxx, 1xxx, and 3xxx level courses

Tuition	<u>1st pmt.</u>	<u>2nd pmt.</u>	<u>3rd pmt.</u>
	(at registration)	(30 days)	(60 days)
\$31.00 (2 cr at \$15.50/cr)	\$14.00	\$10.00	\$10.00
\$46.50 (3 cr at \$15.50/cr)	\$18.50	\$15.50	\$15.50
\$62.00 (4 cr at \$15.50/cr)	\$24.00	\$20.50	\$20.50
\$77.50 (5 cr at \$15.50/cr)	\$29.00	\$25.75	\$25.75

5xxx level courses

Tuition	<u>1st pmt.</u>	<u>2nd pmt.</u>	<u>3rd pmt.</u>
	(at registration)	(30 days)	(60 days)
\$34.00 (2 cr at \$17.00/cr)	\$15.00	\$11.00	\$11.00
\$51.00 (3 cr at \$17.00/cr)	\$20.00	\$17.00	\$17.00
\$68.00 (4 cr at \$17.00/cr)	\$26.00	\$22.50	\$22.50
\$85.00 (5 cr at \$17.00/cr)	\$31.50	\$28.25	\$28.25

Lessons will be accepted only through that third of the course for which tuition has been paid. For example, students enrolled in a three-credit course of 12 lessons will not receive instruction beyond lesson four if they have made only the first payment.

Registration will be cancelled if the total tuition has not been paid within 90 days of the original registration 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

## **General Information**

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 you 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, MN 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.

You should be aware of limitations placed on the S-N grading system since each college determines to what extent and under what conditions this system may be used by its students. Colleges usually specify which courses or what proportion of courses may be taken on a particular grading system by its students or prospective students.

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, MN 55455, before enrolling.

Of the total credits required to complete a certificate program, only 25 percent may be taken on S-N. Students not working on a degree or certificate program, and not intending to apply credits toward such a program later, 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 course grades as follows: for each credit of A, four grade points; B, three grade points; C, two grade points; D, one grade point; N, no grade points. Your grade point average is determined by dividing the sum of grade points by the sum of credits attempted, both passed and

failed. Credits earned in classes taken on the S-N grading system are not included in determining grade point average.

### **Withdrawals, Cancellations, and Incompletes**

No grade will be recorded for students who cancel or do not complete their Independent Study course within the one-year time limit. Upon completion of all course requirements, a grade report is issued from the Office of Admissions and Records.

### **Group Study**

See Ways to Earn Credit through Independent Study in center section of this bulletin.

### **High School Students**

Extension Independent Study offers approximately 50 high school credit courses 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. 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 credit 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, and other subjects can serve as a valuable review for students preparing to take the examinations. For detailed information about the GED examinations in Minnesota, contact Mr. Donald A. Peterson, Coordinator, Community Education Section, State Department of Education, Capitol Square Building, 550 Cedar Street, St. Paul, MN 55101; telephone (612) 296-4057.

### **Lesson Service**

The Department of Independent Study makes every effort to provide reasonable and prompt lesson service. Because some lapse of time is inevitable, however, in the handling and evaluation of assignments, you should allow at least one week between the time an assignment is received

## **General Information**

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 instructors' off-campus addresses, lesson return may be somewhat slower. However, you are urged to contact the Department of Independent Study regarding any lesson not returned within three weeks from the date on which it was submitted.

## **Lesson Submission**

One of the major advantages of Independent Study is that it permits you to progress at your 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. New assignments should not be submitted until you receive the instructor's comments on assignments already submitted. Submit assignments as you complete them rather than sending several at one time.

Generally, you should plan on a minimum of two weeks to complete each credit. A three-credit course, therefore, would require a minimum of six weeks to complete. In addition, allow at least three weeks from the date the course is completed for the final grade to be recorded on the transcripts in the Office of Admissions and Records. Students with special time limitations should check with the Department of Independent Study, before enrolling, about the feasibility of meeting their particular credit deadline.

An Independent Study course may be started at any time and should be completed within one year from the date of registration. For information on reinstating enrollments that have expired, see Reinstatements under Fees.

## **Library and Audio-Visual Facilities**

In addition to the required textbooks you will purchase for your Independent Study course, you have access to a variety of library resources. You are urged to use your local public, school, or college library for both supplemental and required reading other than textbooks. Many Minnesota colleges and universities will extend library privileges to University of Minnesota Independent Study students who show a fee statement (the student's copy of the registration form). Students must agree to abide by the regulations of these libraries. Course grades may not be issued

or transferred for students who fail to comply with individual institutional library regulations.

In addition, most Minnesota libraries are participants of MINITEX (Minnesota Interlibrary Telecommunications Exchange), a legislatively funded program that shares library resources. If the local library does not have a needed resource, it can generally be secured from another library. Students needing assistance in identifying or locating community library resources may call (612) 376-3925 or (800) 552-1138.

The following library and resource facilities are also available.

**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 who reinstate for a second year in a course must present proof of reinstatement at the library to withdraw books. Students wishing to borrow by mail should fill out the request form included with their course materials and return it to the Circulation Department, Wilson Library, University of Minnesota, Minneapolis, MN 55455. Library loans by mail are subject to all library regulations and must be returned on demand. No library books can be sent overseas.

**Loan Library** — 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.

**Audio Visual Library Service** — This office provides audio-visual library services for assistance in the use of nonprint and print media as a learning resource. 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 for student use. 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, Audio Visual Library Services, 3300 University Avenue SE, Minneapolis, MN 55415; telephone (612) 373-5452.

## General Information

**Learning Resources Center** — The University of Minnesota Learning Resources Center, Minneapolis Campus, and the Instructional Resource Center, St. Paul Campus, house over 5,000 cassette and reel-to-reel tapes for use in languages, music, social sciences, and other disciplines. Independent Study students are eligible to use the language laboratory and/or to borrow materials on a long-term loan basis upon presentation of the student's copy of the completed registration form. The addresses and phone numbers of both the St. Paul and Minneapolis resource centers appear below. Please call for information on relevant course materials and on laboratory hours.

Learning Resources Center  
204a Walter Library  
Minneapolis Campus  
Telephone (612) 373-2538

Instructional Resources Center  
Second Floor, Temporary South of Coffey  
St. Paul Campus  
Telephone (612) 373-1622

## National University Extension Association (NUEA)

The Department of Independent Study is a member of the Independent Study Division of the National University Extension Association. The division publishes a **Guide to Independent Study** that lists Independent Study courses offered by 73 colleges. It is available from the National University Extension Association, One Dupont Circle, Suite 360, Washington, DC 20036. For single copies, the cost is \$1.

## 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:

July 5, 1976	Monday after Independence Day
September 6, 1976	Labor Day
November 25, 1976	Thanksgiving Day
November 26, 1976	Friday after Thanksgiving
December 24, 1976	Christmas Eve Day
December 31, 1976	New Year's Eve Day
February 21, 1977	Presidents' Day
May 30, 1977	Memorial Day

## Overseas and Foreign Students

The Department of Independent Study welcomes registrations from students living or traveling in foreign countries. Since courses are available

only in English, students must have sufficient knowledge of English to be able to read and write assignments without difficulty.

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. Library materials, records, and certain other supplementary materials cannot be sent overseas. For complete information regarding overseas lesson service and postage, see **Fees**.

### **Partial Payment Plan**

See Financial Assistance

### **Postage**

See Fees

### **Purchase of Study Guides**

Students not wishing instruction or credit for an Independent Study course may purchase individual study guides. To obtain the price of a study guide, mail the name of the course to Irene Anderson, Office Supervisor, Department of Independent Study, 38 Wesbrook Hall, University of Minnesota, Minneapolis, MN 55455.

### **Radio Courses**

See Ways to Earn Credit through Independent Study in center section of the bulletin.

### **Refunds**

See Fees

### **Senior Citizens in Minnesota**

Minnesota residents, 62 years of age or older, may register in Extension Independent Study noncredit courses at no tuition cost and in credit courses for a tuition fee of \$2 per credit. In either case, the registrant will be required to pay for the study materials. For further information, telephone (612) 373-3256 or write the Department of Independent Study.

## **General Information**

### **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.

For additional information, contact the Project Coordinator, Independent Study Program for Hospital and Health Care Facility Administrators, 186 Frontier Hall, University of Minnesota, Minneapolis, MN 55455.

#### **Independent Study Program in Patient Care Administration**

The intent of the Independent Study Program in Patient Care Administration is to improve the practice of patient care administration and, as a result, to improve the delivery of health care. 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.

For additional information contact the Project Director, Independent Study Program in Patient Care Administration, 186 Frontier Hall, University of Minnesota, Minneapolis, MN 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 transferable to many colleges and universities throughout the United States.

For additional information, write to the Center for Long Term Care Administration Education, 194 Frontier Hall, University of Minnesota, Minneapolis, MN 55455.



## **Tapes and Tape Recorders**

The Department of Independent Study has available for loan a number of cassette tape recorders for use with 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 (\$15 is a non-refundable rental fee, and \$5 is refundable when the tape recorder is returned undamaged). The loan period may be extended for a renewal fee of \$5 per month; otherwise, students will be charged a fine for use beyond the basic loan period. Students will be held responsible for any loss or damage to machines in their possession or in transit to the Department of Independent Study. Cassette tape recorders will not be sent overseas. Audio cassette tapes may be purchased or rented from the Department of Independent Study. Rental requires a deposit equivalent to the listed cost of the cassettes. This deposit, minus \$5 handling and mailing fee, will be refunded when the cassettes are returned in good condition.

For more information regarding the loan of cassette tape recorders or audio cassette tapes, call or write the Department of Independent Study, 45 Wesbrook Hall, University of Minnesota, Minneapolis, MN 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; it 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, Capitol Square Building, 550 Cedar, St. Paul, MN 55101.)

## **Television Courses**

See Ways to Earn Credit through Independent Study in center section of the bulletin.

## **Textbooks and Supplies**

Textbooks and supplies needed for a course, and the procedure for ordering them, are explained in the study guide sent to you upon registering. 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.

## **General Information**

Students who wish to sell their books after a course is completed should contact Kathryn Olin, Nicholson Hall Bookstore, Room 7, University of Minnesota, Minneapolis, MN 55455; telephone (612) 373-3688. Only books in current use will be purchased. Please inquire before sending books.

## **Transferring to Another Course**

You may transfer from one Extension Independent Study course to another providing you do so within three months from the date of registration and prior to the completion of half the lessons in the course. The transfer fee is 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. (See **Fees**.) When a transfer is recommended by the Department of Independent Study, you are charged only for lessons evaluated by the instructor.

Transfers are allowed only once per registration and cannot be made from one individual to another.

## **Transcripts**

An unofficial transcript is sent to 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. Send your name, address, and the name of that institution to:

Extension Transcript Department  
Window 17, 105 Morrill Hall  
University of Minnesota  
Minneapolis, MN 55455

## **Video Cassette Courses**

See Ways to Earn Credit through Independent Study in center section of this bulletin.

## **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.

# Extension Certificate Programs

Certificate programs are generally regarded by business and industry as valuable professional and technical preparation for employment and promotion in areas requiring extensive knowledge. Students whose career plans require college training, but who cannot devote the time necessary to earn a degree, are urged to consider a certificate program. With careful planning, a certificate can be a stepping stone to a degree program.

Continuing Education and Extension conducts 33 certificate programs consisting of degree credit courses or a combination of degree and certificate credit courses. Students entering programs should have adequate educational preparation or other experience that qualifies them to work effectively with college materials. The 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, usually transferable to a degree program.

Work on most certificates may be done through Extension Independent Study, Extension Classes, day school, summer session, or any combination of these. Students may transfer 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.

Certificate requirements are subject to modification 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, 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, MN 55455.

## Extension Certificate Programs

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.

Courses or course sequences available through Extension Independent Study are following by an asterisk (\*).

## Extension Certificates — Group I

### Fire Protection Certificate (45-46 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 community responsible for fire protection. It is designed to expand 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 Extension Independent Study.** Three courses now available are FPro 0004C, 0005C, and 0007C. Additional core courses will become available at the rate of one or two each year. 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 may transfer credits for equivalent courses from other institutions accredited by the University of Minnesota, although a minimum of 12 credits must be earned at the University of Minnesota.

#### English Requirement (3-4 credits)

Comm 1001, or Comp 1001\*; or Spch 0001C, or Spch 1101

#### Core Requirement (24 credits)

FPro 0001C — Introduction to Fire Protection  
FPro 0002C — Hazardous Materials and Processes I  
FPro 0003C — Hazardous Materials and Processes II  
FPro 0004C — Fire Prevention and Control\*  
FPro 0005C — Fire Protection and Life Safety Systems in Building Design\*  
FP0006C — Institutional and Industrial Fire Protection  
FPro 0007C — Fire Department Administration\*  
FPro 0008C — Advanced Hazardous Materials

#### Spread Requirement (18 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\*

## 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. (A list of General College courses offered through Extension Independent Study is found on page 25.)

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 A.A. 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 liberal arts or business fields.

Students transferring credits to this certificate program from other accredited institutions must take a minimum of 12 credits at the University of Minnesota.

### English Requirement (8 credits)

Comp 1001-1002 — Introductory Composition\*, or equivalent

### Spread Requirement (32 credits) 8 credits in each of the following groups

#### Group A

Communication, Language, Symbolic Systems: accounting, computer sciences, composition (other than freshman English), journalism, language, philosophy, mathematics, speech, statistics

#### Group B

Physical and Biological Sciences: astronomy, biology, chemistry, ecology, geology, physics

#### Group C

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

#### Group D

Artistic Expression: art, architecture, classics, humanities, literature, music, theatre arts

**Electives:** Additional liberal arts courses are required to make a minimum of 45 credits total for the certificate. Before taking courses applicable to this certificate, students should call or write the Department of Independent Study, 45 Westbrook Hall, University of Minnesota, Minneapolis, MN 55455; telephone (612) 373-3256 for a copy of CLA courses offered through Continuing Education and Extension that meet the Group Distribution Requirements.

## Extension Certificate Programs

### Mathematics and Science Certificate (45 credits)

Students transferring credits to this program from other accredited institutions must take a minimum of 12 credits at the University of Minnesota.

**Prerequisite:** Two years of algebra and two years of geometry including trigonometry.

#### Core Requirement (24 credits)

Comp 1001 — Introductory Composition\*,  
or Comm 1001 — Communication  
Math 1211 — Analysis I\*

Math 1221 — Analysis II\*  
Math 1231 — Analysis III\*  
Math 3211 — Analysis IV\*

**Electives:** Additional credits to make a total of 45 credits, selected from the following areas

Astronomy  
Chemistry  
Engineering

Geology  
Physics  
Aerospace Engineering and Mechanics

### Police Administration Certificate (46-47 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.

Students transferring credits to this program from other accredited institutions must take a minimum of 12 credits at the University of Minnesota.

The core courses offered for certificate credit are available only through Extension Independent Study.

#### English Requirement (8-9 credits)

Comp 1001-1002\*, or equivalent; or Comp 1001 and additional credits selected from Hum 1001 or 1101\*, 1002\*, 1003 or 1103\*, 1004 or 1104\*.

#### Core Requirement (16 credits)

Soc 3101—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 1031—American Public Policy\*  
Soc 1002—American Community\*  
Soc 5951—Minority Group Relations\*

## 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 course sequences available from the Department of Independent Study are followed by an asterisk (\*).

### Accounting Certificates

The Junior Accounting Certificate program is of value to junior accounting personnel, management personnel, and business people who need a basic understanding of the principles of accounting and corporate finance.

The requirements for the Senior Accounting Certificate are similar to those for a four-year degree in accounting. This program provides a good background for the Certified Public Accountant examinations.

#### Junior Accounting Certificate (52-53 credits)

Students transferring credits to this program from other accredited 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\*  
 Acct 1024-1025-1026\*, or Acct 1050-1051—Principles of Accounting  
 Acct 3105-3106-3107—Intermediate Accounting

Acct 3220-3221—Cost Accounting  
 BFin 3000—Finance Fundamentals  
 Math 1201—Pre-Calculus, or Math 1131—Finite Mathematics, or Math 1111—College Algebra and Analytic Geometry\*  
 QA1050—Elementary Managerial Statistics

#### Senior Accounting Certificate (93-94 credits)

Students transferring credits to this program from other accredited institutions must take a minimum of 24 credits in accounting at the University 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 Math 1131—Finite Mathematics, or Math 1111—College Algebra and Analytic Geometry\*  
 Math 1142—Introduction to Calculus of One and Several Variables\*, or Math 1211-1221—Analysis I-II\*, or equivalent

QA 1050—Elementary Managerial Statistics  
 Econ 1001, 1002—Principles of Macroeconomics and Microeconomics\*  
 Acct 1024-1025-1026\*, or Acct 1050-1051—Principles of Accounting  
 Acct 3105-3106-3107—Intermediate Accounting  
 Acct 3220-3221—Cost Accounting  
 BFin 3000—Finance Fundamentals  
 BLaw 3058—Business Law: Contracts\*

## Extension Certificate Programs

### 16 credits 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  
BGS 3002—Business and Society  
QA 3055—Introduction to Management Science  
MIS 3099—Elementary Fortran

## 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 four-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 (45-46 credits)

This certificate, requiring the satisfactory completion of 45-46 credits of course work, represents the equivalent of one 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 accredited institutions to this program must take a minimum of 12 credits at the University of Minnesota.

### Pre-business Requirement (34 credits)

Comp 1001-1002—Introductory Composition\*, or Comm 1001-1002—Communication, or equivalent  
Econ 1001, 1002—Principles of Macroeconomics and Microeconomics\*  
Acct 1024-1025-1026\*, or Acct 1050-1051—Principles of Accounting

Math 1201—Pre-Calculus, or Math 1131—Finite Mathematics, or Math 1111—College Algebra and Analytic Geometry\*  
QA 1050—Elementary Managerial Statistics

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

MIS 5100—Computers and Systems Design  
IR 3002—Systems of Industrial Relations:  
Labor Marketing\*  
Ins 3100—Risk Management and Insurance\*  
Mgmt 3004—Business Policy: Strategy Formulation and Implementation  
Econ 3101—Microeconomic Theory  
BGS 3002—Business and Society  
QA 3055—Introduction to Management Science

MIS 3099—Elementary Fortran  
Mgmt 3001—Fundamentals of Management  
Math 1211-1221—Analysis I-II\*, or Math 1142—Introduction to Calculus of One and Several Variables\*  
Tran 3054—Fundamentals of Transportation  
BFin 0001C—Introduction to Investments  
BFin 3000—Finance Fundamentals  
Mktg 3000—Principles of Marketing  
BLaw 3058—Business Law: Contracts\*



### Senior Business Administration Certificate (90-91 credits)

The Senior Business Administration Certificate is a continuation of the Junior Certificate, expanding the core and spread requirements to provide a broader base of general knowledge and an opportunity for specialization. The completion of the certificate requirement of 90-91 credit-hours represents the equivalent of two full years of university-level study. The course program may be considered roughly equivalent to 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 accredited institutions must take a minimum of 24 credits at the University of Minnesota.

#### Pre-business Requirement (38-39 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\*, or Acct 1050-1051—Principles of Accounting

Math 1201—Pre-Calculus, or Math 1131—Finite Mathematics, or Math 1111—College Algebra and Analytic Geometry\*  
Math 1211-1221—Analysis I-II\*, or Math 1142—Introduction to Calculus of One and Several Variables\*  
QA 1050—Elementary Managerial Statistics

#### Core Requirements (24 credits) Six courses selected from the following

MIS 5100—Computers and Systems Design  
MIS 3099—Elementary Fortran  
IR3002—Systems of Industrial Relations: Labor Marketing\*  
Ins 3100—Risk Management and Insurance\*  
Tran 3054—Fundamentals of Transportation  
QA 3055—Introduction to Management Science  
BCS 3002—Business and Society

BFin 0001C—Introduction to Investments  
BFin 3000—Finance Fundamentals  
Mktg 3000—Principles of Marketing  
BLaw 3058—Business Law: Contracts\*  
Mgmt 3001—Fundamentals of Management  
Mgmt 3004—Business Policy: Strategy Formulation and Implementation  
Econ 3101—Microeconomic Theory

**Electives in the College of Business Administration:** At least 16 additional credits in business administration. These may be selected from the core 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 90-91 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 and are urged to contact the Extension Counseling Office early in their program.

### Credit and Financial Management Certificate (63-65 credits)

The Credit and Financial Management Certificate program was developed cooperatively by Continuing Education and Extension, the College of

## Extension Certificate Programs

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 accredited 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, MN 55402; telephone (612) 371-3951.

### Core Requirement (55 credits)

Acct 1024-1025-1026\*, or Acct 1050-1051—  
Principles of Accounting  
Acct 3160—Analysis of Financial Statements  
BFin 0002C—Credit and Financial Management Problems  
BLaw 3058, 3078, 3088—Business Law\*  
Econ 1001, 1002—Principles of Macroeconomics and Microeconomics\*

IR 0001C—Supervision I\*  
Mgmt 3002—Psychology in Management  
Mktg 3000—Principles of Marketing  
Mktg 0087C—Credits and Collections  
Comp 0004C—Business Correspondence, or  
GC1531—Business Writing\*  
Spch 0001C—Beginning Speech: Communication

### Electives (8 credits)

Acct 3105—Intermediate Accounting  
Acct 3220—Cost Accounting  
BFin 0001C—Introduction to Investments  
BFin 3000—Finance Fundamentals  
BFin 3100—Financial Management  
Econ 3751—Money and Banking\*

Ins 3100—Risk Management and Insurance\*  
Mgmt 3001—Fundamentals of Management  
Mktg 3080—Industrial and Government Procurement  
Tran 3054—Fundamentals of Transportation  
Comp 0003C—Review of Business English

## Human Services Certificate (46 credits)

The Human Services Certificate program was developed in response to an increasing demand for specialized certificates for paraprofessionals in community service. Paraprofessionals 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. 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 a counselor. The certificate is flexible and provides a variety of educational opportunities for paraprofessionals.

Students interested in following a degree program may, with careful planning, transfer credits earned for this certificate toward a degree in

## Extension Certificate Programs

General College or the College of Liberal Arts. Students transferring credits to this program from other accredited institutions must take a minimum of 12 credits at the University 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, MN 55455; telephone (612) 373-3905.

### Core Requirement (27 credits)

GC 1421—Writing Lab: Personal Writing, or  
Comp 1001—Introductory Composition\*,  
or Comm 1001—Communication  
GC 1461—Oral Communication: Basic Principles, or Spch 1101—Fundamentals of Speech  
GC 1471—Creative Problem Solving  
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:** GC 1627—Human Services Practicum, and/or approved related courses 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  
Minority Studies—Chicano

**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 FSoS 1025—Parenthood  
Geog 1301—Human Geography  
GC 1233—United States: Problems of Government, or Pol 1001—American Government and Politics\*

GC 1281—Psychology of Modern Society, or Psy 1001—General Psychology\*  
CPsy 1301—Child Psychology\*  
SSci 3203—Structure and Dynamics of Poverty  
Rhet 1147—Efficient Reading\*  
Up to 6 credits in art, music, literature, or humanities from either the General College or the College of Liberal Arts

## Industrial Relations Certificate (45 credits)

The Industrial Relations Certificate is arranged and coordinated by the Department of Industrial Relations of the College of Business Administration. It is designed to provide technical training in the field of industrial relations and in the use of specialist techniques. Advanced professional training in Industrial Relations is available only through the M.A. and Ph.D. programs.

## Extension Certificate Programs

Students transferring credits to this program from other accredited institutions must take a minimum of 12 credits at the University of Minnesota.

**Note:** Courses at the 3000-level are primarily for juniors and seniors. Courses at the 5000-level are primarily for juniors, seniors, and graduate students.

### Core Requirement (33 credits)

Econ 1001, 1002—Principles of Macroeconomics and Microeconomics\*  
IR 3002—Systems of Industrial Relations: Labor Marketing\*  
IR 3007—Collective Bargaining Negotiations and Modern Labor Relations

IR 3010—Human Relations and Applied Organization Theory  
Psy 1001—General Psychology\*  
Psy 3801—Introduction to Statistical Methods  
Soc 1001—Introduction to Sociology\*

### Electives (12 credits)

Econ 3501—Labor Economics  
Econ 3551—Labor Economics  
Econ 5541—Contemporary Labor Issues  
Econ 5534—Economic Security\*  
Econ 5537—Labor Market Behavior and Regulation\*  
Econ 5561—Economics of Collective Bargaining  
IR 0001C—Supervision I\*  
IR 3012—Systems of Industrial Relations: Manpower Management\*  
IR 3000—Topics in Industrial Relations  
IR 0007C—Occupational Safety and Health  
GC 1081, 1082—Personnel Selection Techniques  
MIS 5100—Computers and Systems Design  
Mgmt 3002—Psychology in Management  
QA 3055—Introduction to Management Science

Psy 3124—Psychology of Individual Differences  
Psy 5044—Psychology of Motivation and Conflict  
Psy 3011—Introduction to Psychology of Learning  
Psy 5501—Vocational Psychology  
Psy 5701—Personnel and Industrial Psychology  
Soc 5201—Social Psychology\*  
Soc 5411—Formal Organization  
IEOR 0100C—Industrial Engineering and Management  
IEOR 0210C—Motion and Time Study Engineering\*  
IEOR 0408C, 0409C—Corporate Standard Data I, II

## Management of Administrative Services Certificates

The Management of Administrative Services Certificate programs have been developed by Continuing Education and Extension 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 former certificates may write to: Education Director, Administrative Management Society, 1414 Soo Line Building, Minneapolis, MN 55402.

**Associate in Management of Administrative Services Certificate**  
(45-47 credits)

Students transferring credits to this program from other accredited institutions must take a minimum of 12 credits at the University of Minnesota.

**Core Requirement (41-43 credits)**

GC 1531—Business Writing\*, or Comp 1001—Introductory Composition\*, or Comp 0003C—Review of Business English, or Comm 1001—Communication, or equivalent

Econ 1001, 1002—Principles of Macroeconomics and Microeconomics\*

Math 1201—Pre-Calculus, or Math 1131—Finite Mathematics, or Math 1111—College Algebra and Analytic Geometry\*

MIS 5100—Computers and Systems Design  
Acct 1024-1025-1026\*, or Acct 1050-1051—Principles of Accounting  
BLaw 3058—Business Law\*  
Psy 1001—General Psychology\*  
Psy 3801—Introduction to Statistical Methods

**Electives:** Additional courses to be selected from the list of requirements or electives for the senior certificate that follows to make a total of 45 credits minimum.

**Fellow in Management of Administrative Services Certificate**  
(91 credits)

Students transferring credits to this program from other accredited institutions must take a minimum of 24 credits at the University of Minnesota.

**Core Requirement (41-43 credits)**

Comp 0003C—Review of Business English and GC 1531—Business Writing\*, or Comp 1001-1002—Introductory Composition\*, or Comm 1001-1002—Communication, or equivalent

Econ 1001, 1002—Principles of Macroeconomics and Microeconomics\*

Acct 1024-1025-1026\*, or Acct 1050-1051—Principles of Accounting

BLaw 3058—Business Law\*  
Math 1201—Pre-Calculus, or Math 1131, Finite Mathematics, or Math 1111—College Algebra and Analytic Geometry\*, or equivalent  
MIS 5100—Computers and Systems Design  
Psy 1001—General Psychology\*  
Psy 3801—Introduction to Statistical Methods

**Group Requirements (36 credits)**

**Group I**—At least four courses from the following (16 credits)

IR 3002—Systems of Industrial Relations: Labor Marketing\*  
Mgmt 3002—Psychology in Management  
BFin 0001C—Introduction to Investments

BFin 3000—Finance Fundamentals  
Ins 3100—Risk Management and Insurance\*  
Mktg 3000—Principles of Marketing

**Group II**—At least five courses from the following (20 credits)

BFin 3100—Financial Management  
Tran 3054—Fundamentals of Transportation  
Acct 3255—Managerial Costs, or Acct 3220—Cost Accounting  
Acct 3160—Analysis of Financial Statements  
IR 3010—Human Relations and Applied Organization Theory

IR 3012—Systems of Industrial Relations: Manpower Management\*  
Mgmt 3001—Fundamentals of Management  
BLaw 3088—Business Law\*

## Extension Certificate Programs

**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 Certificate Series

The UDC series provides a focus for the planning of continuing education in particular disciplines and recognizes 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, 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 are important.

In general, the 45-credit certificate indicates familiarity with the topical area and is equivalent to the first year of college 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.

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, MN 55455; telephone (612) 373-3905.

### Undergraduate Development Certificate in Engineering and Science — 45 Credits

The UDC in Engineering and Science — 45 Credits is designed to provide students with the fundamentals of mathematics, physics, and broad technical communications skills enabling them to handle 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 the student's admission to the Institute of Technology.

## Extension Certificate Programs

Students transferring credits to this program from other accredited 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 Fortran Pro-

gramming I-II, or CICS 3101—A Fortran

Introduction to Computer Programming

Phys 1271-1275-1281-1285—General Physics  
and Lab

Comp 1001-1002—Introductory Composi-  
tion\*, 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.)



"Mankato 1970"

Lithograph by Leroy B. Schwan

April 1972

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# University Degree Programs

Through Extension Independent Study, you can work on any of several degrees offered by the University of Minnesota. Through action of the University Senate, Extension Independent Study credits are now considered resident credits.

Because it is important to plan course work and to follow University procedures when working on a degree, you should arrange for early consultation by contacting the Extension Counseling Office, 314 Nolte Center, University of Minnesota, Minneapolis, MN 55455; telephone (612) 373-3509.

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, B-3 Morrill Hall, University of Minnesota, Minneapolis, MN 55455.

## 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, MN 55414.

## Teacher's Certificate

Most Independent Study courses can be used in the acquisition and renewal of teachers' certificates. Note that the Department of Independent Study only provides the courses; it **does not evaluate teaching or educational experience for a certificate or recommend courses.**

## **University Degree Programs**

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 Certification and Placement, Capitol Square Building, 550 Cedar, St. Paul, MN 55101.)

### **General College**

106 Nicholson Hall, Minneapolis Campus

#### **Associate in Arts Degree**

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 Independent Study. It is possible, with careful planning, to obtain the entire A.A. degree through the Department of Independent Study.

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.

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.

The General College Comprehensive Examination may be scheduled through the Department of Independent Study and taken either in the Independent Study Examination Center or under the supervision of an appropriate proctor in an out-state location.

#### **General College Occupational Options**

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. Some of the programs leading to General College degrees are combinations of course work in another post-high school institution and the General College. Further information about 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.

### **Bachelor of Applied Studies (B.A.S.)**

### **Bachelor of General Studies (B.G.S.)**

Students admitted to baccalaureate 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 non-collegiate post-high school education, for independent study, for participation in community projects, and for other unconventional learning experiences related to their programs.

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. After the first 90 credits (A.A.), 45 credits in both baccalaureate degree programs must be taken in General College courses. Credits earned in General College courses offered through the Department of Independent Study can be used toward this requirement.

Students holding A.A. degrees or nearing completion of A.A. degrees may learn more about General College Baccalaureate Programs by making an appointment with a Baccalaureate Programs Advising Coordinator, 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.

## University Degree Programs

### **Institute of Technology**

105 Lind Hall, Minneapolis Campus

The Institute of Technology grants degrees in approximately 11 fields of engineering and architecture, plus geophysics, geology, chemistry, physics, mathematics, and environmental design. In addition to 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 **Institute of Technology 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, MN 55455.

### **College of Business Administration**

225 Business Administration Building, Minneapolis Campus

Most of the pre-business course requirements for the Bachelor of Science in business are available through the Department of Independent Study. The business requirements may be satisfied in part with courses through the Department of Independent Study. Interested students should arrange for early consultation by contacting the Extension Counseling Office, 314 Nolte Center, University of Minnesota, Minneapolis, MN 55455.

Both the accounting and the regular business programs are outlined in the **College of Business Administration Bulletin**, available from the Service Bureau, B-3 Morrill Hall, University of Minnesota, Minneapolis, MN 55455. For a list of the pre-business and business courses offered through Independent Study that meet the College of Business requirements, write to Department of Independent Study, 45 Westbrook Hall, University of Minnesota, Minneapolis, MN 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, B-3 Morrill Hall, University of Minnesota, Minneapolis, MN 55455. In addition, students should contact the Extension Counseling Office, 314 Nolte Center, University of Minnesota, Minneapolis, MN 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 acceptable to CLA, 45 of them on A-N grading;
2. At least 45 University of Minnesota credits;
3. Satisfaction of the CLA English composition requirement;
4. Satisfaction of four of the following: (a) foreign language study through the college third-quarter level, or exemption based on three or more years of high school 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; at least the first 90 credits may be taken through the Department of Independent Study. Lack of departmental offerings are the only restriction against earning a degree through Independent Study. 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 (45 awarded in CLA courses). They must also satisfy the English composition, foreign language, and Group Distribution requirements. Finally, B.A. candidates must complete a major sequence in the field of their choice and complete at least 30 credits in 3000 and/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, 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 may be more extensive and concentrated. For further information call the Extension Counseling Office, telephone (612) 373-3905.

### **Bachelor of Elected Studies (B.E.S.)**

The experimental Bachelor of Elected Studies degree is now undergoing review and is not opened for new registrations. The program may become available again within the year 1976-1977.

## **University Degree Programs**

The degree offers wide latitude in individual program planning. B.E.S. candidates have to meet the usual CLA quality standards, but are exempted from group distribution and major requirements. They may include up to 30 credits in courses not normally acceptable to a CLA degree.

Students interested in any of the College of Liberal Arts programs should contact the Extension Counseling Office, 314 Nolte Center, Minneapolis, MN 55455; telephone (612) 373-3905.

## **University College**

105 Walter Library, Minneapolis Campus

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, most of University College's specific programs are, therefore, experimental and not permanent features in the college. From year to year new programs can be added, and programs that have completed their experimental phase will go under some other auspices. Presently, University College has four degree-granting programs: the Inter-College Program, the Experimental College, University Without Walls, and University Scholars Program. Students interested in working toward a degree through one of these programs should contact the Extension Counseling Office, 314 Nolte Center, Minneapolis, MN 55455; telephone (612) 373-3905.

## **University Without Walls**

201 Westbrook Hall, Minneapolis Campus

The University Without Walls (UWW) is a program of University College designed to provide students in both the metropolitan area and out-state Minnesota with new opportunities in higher education leading to the baccalaureate degree.

Minnesota's UWW program is intended to serve "educationally mature" students who have clear learning objectives, but, who, for a variety of reasons, cannot realize their educational aims through existing programs. Prospective students need to be realistic about their own styles and goals of learning. The University Without Walls program is neither easy nor unstructured.

Learning in UWW begins with the student's own educational objectives. UWW students are expected to design and carry out their own study activities without prodding from others. However, in-depth advising is available to UWW students from UWW program advisors, University faculty, and community faculty.

Learning can take place through the classroom, Independent Study courses, independent study projects, and the community. Students must be able to design and carry out their own study projects. They are expected to design proposals for study, including the following: (a) a statement of learning objectives; (b) methods of study; (c) rationales for studies pursued; (d) criteria for evaluation. Each study project pursued in the program will usually be only a part of the overall degree program. Most graduates of the program will carry out five or six study projects as part of their overall degree program. UWW students graduate by meeting seven graduation criteria and preparing a graduation dossier that includes a readiness statement, illustrative samples of the student's work, and a Narrative Transcript. The seven graduation criteria students are required to meet are:

1. Self-Directed Study Skills
2. Communication Skills
3. Academic Achievement
4. Variety of Learning Activities
5. Scientific Inquiry
6. Artistic Expression
7. Major Project

More detailed explanations of these graduation criteria are given in the **University Without Walls Brochure**.

Admissions to UWW are based on three fundamental criteria.

1. **Clear learning objectives:** Applicants must be able to clearly state both their short and long-term learning goals. Short-term goals are stated in the project proposal in the application. The long-term learning goals are stated in the long-term plan toward graduation which is also in the UWW application.
2. **Barriers:** Applicants must be able to articulate what barriers they face in obtaining an education. UWW is intended for students who, because of reasons of geography, time limitations, unusual interest areas, handicaps, etc., are "immobilized" and therefore cannot take advantage of other programs.
3. **Ability to communicate:** Applicants must demonstrate that they can communicate in writing. Prospective students must be able to articulate in writing a barrier, long-term and short-term learning goals.

Persons considering applying to UWW should consider the unusually high level of self-direction and freedom from customary external reinforcements which make UWW a very different type of educational process. While UWW has already demonstrated wide appeal to a diversity of people; the program is not for everyone. Learning through UWW is not easy; in many respects, in fact, UWW is more demanding than most traditional programs.

## **University Degree Programs**

There are no age nor minimum educational level requirements for admission to UWW. However, students are required to register on a full-time basis. Applicants need not be high school graduates. Applications are accepted quarterly. A personal interview with the UWW staff is, however, strongly recommended in order to ensure that proper action is taken on the individual's application for admission.

Additional information and/or applications may be obtained by contacting University Without Walls, 201 Westbrook Hall, University of Minnesota, Minneapolis, MN 55455; telephone (612) 373-3919.

For persons living in West Central Minnesota, contact University Without Walls, c/o Morris Learning Center, Room 236 Community Services Building, Morris, MN 56267; telephone (612) 589-1041.



# Faculty

## University of Minnesota Faculty, Current and Emeritus

**Nancy Adams, B.A.**  
Teaching Associate, Classics

**F.R.P. Akehurst, Ph.D.**  
Associate Professor of French

**Robert Alexander, M.A.**  
Teaching Assistant, Sociology

**Bernard S. Bachrach, Ph.D.**  
Professor of History

**Katherine Basham, M.F.A.**  
Assistant Professor of English

**John V. Bell, M.S.**  
Administrative Officer  
Institute of Technology

**Richard O. Bell, M.A.**  
Teaching Assistant,  
Family Social Science

**Richard Benson, B.A.**  
Teaching Associate, Classics

**Marie Berg, Ph.D.**  
Research Assistant  
Department of Medicine

**Sara Bisel, M.A.**  
Teaching Associate, Classics

**James I. Brown, Ph.D.**  
Professor of Rhetoric

**Roy E. Carter, Jr., Ph.D.**  
Professor of Journalism and  
Mass Communication  
and Sociology

**Frederick M. Chapman, Re.D.**  
Professor of Recreation,  
Park, and Leisure Studies

**Harold Chase, Ph.D.**  
Professor of Political Science

**David Chein, M.A.**  
Instructor of Sociology

**Russell Christensen, M.A.**  
Teaching Associate, German

**Santiago A. Cuneo, Ph.D.**  
Associate Professor Emeritus  
of Spanish

**Dale C. Dahl, Ph.D.**  
Professor of Agricultural  
and Applied Economics

**Everette E. Dennis, Ph.D.**  
Assistant Professor of Journalism  
and Mass Communication

## Faculty

**Helen Dickison, M.A.**

Research Fellow, Institute of  
Child Development

**William Driver, M.A.**

Teaching Assistant, Theatre Arts

**Edwin Emery, Ph.D.**

Professor of Journalism and  
Mass Communication

**David L. Ekstrand, M.A.**

Instructor and Assistant to the  
Director of Department of Men's  
Intercollegiate Athletics

**Gerald Erickson, Ph.D.**

Associate Professor of Classics

**Robert F. Estelle, Ph.D.**

Assistant Professor of Spanish  
and Director of Learning  
Resources Center

**David Estenson, B.A.**

Teaching Associate,  
Industrial Relations

**Robert Eyestone, Ph.D.**

Associate Professor of  
Political Science

**David Fan, Ph.D.**

Associate Professor of Genetics

**Patricia Faunce, Ph.D.**

Associate Professor of Psychology  
and Director of Measurement  
Services Center

**Robert L. Fulton, Ph.D.**

Professor of Sociology

**Basil Furgala, Ph.D.**

Professor of Entomology,  
Fisheries, and Wildlife

**Philip Furia, Ph.D.**

Assistant Professor of English

**Barton Galle, A.B.**

Teaching Associate, English

**David L. Giese, Ph.D.**

Professor, Science, Business, and  
Mathematics Division and  
Coordinator of Curriculum  
Development and Research  
General College

**Luis Gomez, M.A.**

Instructor of Industrial Relations

**Edward M. Griffin, Ph.D.**

Associate Professor of English

**Louise E. Guhl, B.A.**

Assistant Professor of Music

**Rosanne Gulino, B.A.**

Teaching Associate, Classics

**Shamlall Gupta, M.S., M.A.**

Research Assistant, Economics

**Jerome W. Hammond, Ph.D.**

Professor of Agricultural and  
Applied Economics

**Forrest J. Harris, M.A.**

Professor, Social and Behavioral  
Sciences Division  
General College

**Sheila E. Henry, Ph.D.**

Assistant Professor of Family  
Social Science

**Jackson Hershbell, Ph.D.**

Associate Professor of Classics

**Gregory Hundley, B.Com.**

Research Fellow, Industrial  
Engineering

**Dennis R. Hower, J.D.**

Associate Professor, Science,  
Business, and Mathematics  
Division  
General College

**Arthur Johnson, Ph.D.**

Professor of Sociology

**Jeffrey Johnson, B.A.**  
Instructor, University Without Walls  
University College

**Tom B. Jones, Ph.D.**  
Regents' Professor of History

**Robert M. Jordan, Ph.D.**  
Professor of Animal Science

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**"Minnesota Frontier Faces: Lambs Grazing"**

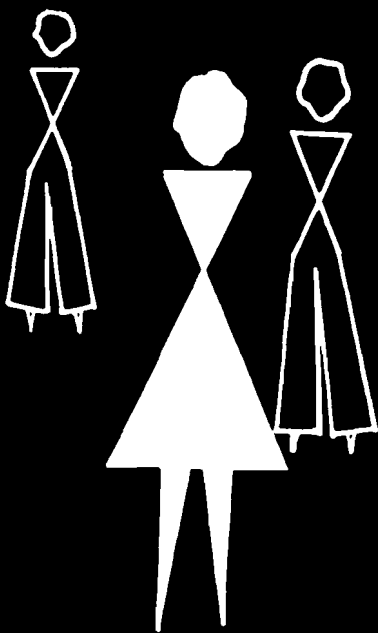
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*continuing education  
for Women*

*1976  
fall  
quarter  
bulletin*



 Continuing Education and Extension  
UNIVERSITY OF MINNESOTA

# O R I E N T A T I O N   D A Y

*A day for new or prospective students to ask questions, for liberal arts seminar registrants to meet classmates and seminar assistants, for CEW friends to come together.*

Wednesday, September 22  
140 Nolte Center  
9:15 a.m.

## P R O G R A M

### WERE THERE WOMEN SCIENTISTS IN THOSE DAYS?

....Indeed there were! A study of some early American women who made significant contributions in spite of limited educational opportunities.

- Elizabeth Reed, PhD, Free lance lecturer and writer in human genetics
- Beatrice A. Smith, PhD, Free lance editorial consultant

### WOMEN AND THE MOTHER TONGUE: STRATEGIES FOR ASSERTIVENESS

A specialist in linguistics discusses women's language.

- Julie Carson, PhD, Professor of English

Coffee and Cookies

No Charge

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### *CONTINUING EDUCATION FOR WOMEN CONTINUING EDUCATION & EXTENSION*

*General Information*  
200 Westbrook Hall  
University of Minnesota  
Minneapolis, MN 55455  
373-9743

## ADMISSION

There are no entrance requirements for admission to classes offered through Continuing Education for Women. A few courses have prerequisites. Advance application and Departmental approval are required for enrollment in the liberal arts seminars. (Courses marked [=] are liberal arts seminars.)

All persons have equal opportunity and access to facilities in any phase of University activity without regard to race, color, sex, age or national origin. Under this principle educational opportunities are available on an equal basis. Men are welcome in all classes.

## ADVISING AND COUNSELING

Free program advising is available to select programs of study, determine prerequisites and standing, evaluate transcripts of previous college work, arrange for examinations for credit or advanced standing, and other academic matters. Students who want counseling for vocational or other problems may make appointments by calling 373-3905. Vocational, aptitude and interest testing is available for a fee.

## REGISTRATION

Registration may be made in person at 200 Westbrook Hall, Minneapolis Campus or by mail.

Registrations made by mail should be sent to Continuing Education for Women, 200 Westbrook Hall, University of Minnesota, Minneapolis, MN 55455 accompanied by check made out to the University of Minnesota. (See back cover.)

September 17 is the last day for tuition payment without a late fee. This applies only to credit classes.

## REGISTRATION OF STUDENTS 62 OR OLDER

Residents 62 or older may take, free of charge, any class offered through Continuing Education for Women. A new state law provides that students over 62 may take



courses "when space is available after all tuition-paying students have been accommodated." If credit is desired, there will be a \$2 per credit charge. This means that in classes where enrollment is limited, students over 62 who have not paid tuition will not immediately be guaranteed a place, but must wait until the first week of the term to register. The enrollee is responsible for material, laboratory, or any special fees.

No mail registrations will be accepted. Call three days before the beginning of the class to confirm that the class will be held and that you can be accommodated.

## GRADES

A - N Letter grading  
S - N Satisfactory/No credit

Choice of A-N or S-N grading system must be indicated for each credit course listed on the registration form at the time of registration and may not be changed after the second week of the quarter. (There is no fee for changing.) If the student does not indicate the grading system desired on the registration form the A-N system will apply.

A student who wants to attend classes, but does not wish to do all the required work, may register as an auditor. Most credit courses may be audited. Courses marked with an [\*] may be taken for a non transcript rate of \$45.

Requests for change from credit to audit registration are made in person or by writing Continuing Education for Women, 200 Westbrook Hall, University of Minnesota, Minneapolis 55455 (373-9743). After the sixth week of a quarter requests for change must be approved by the instructor; approval is granted only if the student is doing passing work at the time of the request. No changes can be made during the last two weeks of any term.

Changes from audit to credit will not be allowed after the second week of the quarter.

Only courses with first digits of 5 may be taken for

graduate credit. If graduate credit is desired, please indicate by checking graduate credit on the registration form.

## FINANCIAL ASSISTANCE

Low income scholarships. Tuition assistance scholarships are available through the Continuing Education and Extension Tuition Assistance Program for low-income adults who wish to enroll in CEW courses.

The Louise Roff Scholarship Fund. Awards from the Louise Roff Scholarship Fund are made on the basis of scholastic ability, motivation, previous achievement, financial need and realistic plans. Small awards are given serious consideration. The funds can be used only for classes offered through CEW. Closing date for fall quarter applications is September 7, 1976.

Application forms for financial assistance may be obtained by calling or writing Fran Van Slyke-Zaslofsky, 317 Nolte Center, 376-4500.

## CONTINUING EDUCATION UNITS

The Continuing Education Unit is a nationally recognized standard unit of measurement awarded by colleges and universities throughout the country for participation in qualified continuing education programs. It is a means of verifying participation in a noncredit experience to serve both personal and professional needs of the adult student.

Under the CEU system, one unit is awarded for every ten contact hours of participation in an organized continuing education experience, under responsible sponsorship, capable direction and qualified instructor.

CEU's will be recorded on a permanent file at the University of Minnesota to permit the accumulation, updating, and transfer of continuing education records of individual participants. A student must complete an application form to qualify for CEU's for designated classes. CEU's will be awarded only if a student is in

attendance 80% of the class sessions.

Registration for CEU's will be handled at the first class session.

## ABBREVIATIONS

- A hyphen between numbers indicates a sequence course, the units of which must be taken in order
- ‡ All courses listed before a dagger must be completed before credit may be received
- \* Courses marked with an asterisk may be taken for a special non transcript rate of \$45 (plus any fees)
- BB Brown Bag School - noon hour courses
- = Indicates Liberal Arts Seminars
- CEU Continuing Education Units

## CALENDAR

Fall Quarter                    Sept 27 - Dec 15

Fall Semester                  Sept 27 - Jan 22

Sept 16-17                    Message and the Medium

Sept 17                        Last day for payment of fees  
without penalty

Sept 20                        Study Skills Workshop begins

Sept 22                        Orientation Day

Oct 9-10                        Fall Retreat at Cragun's

## THE CEW MATH ANXIETY PROGRAM

Some understanding of mathematics is vital for everyday living and an important prerequisite for many fields. Designed for students who have encountered mathematical blocks, the CEW Math Anxiety Program integrates supportive services with course work. Classes are taught by instructors and counselors especially attuned to the needs of people worried about their math ability.

The CEW Math Anxiety Program is supported by a grant from the University of Minnesota Educational Development Program.

### MATH ANXIETY DIAGNOSTIC CLINIC

The first step of the Math Anxiety Program is the Math Anxiety Diagnostic Clinic to be held Wednesday, September 8, 9:00-12:00 a.m. at MacPhail. The clinic will include testing of math skills and math anxiety. Using test results, students will be advised by mail (prior to course registration) as to the level of math proper for them. An overview of the math program and supportive services will be given. The fee for the clinic is \$5. Advance registration requested.

### MATH CLASSES

The following math classes will be offered on a semester basis beginning the week of September 27 and ending the the week of January 17 at MacPhail. These classes are open to anyone--that is, it is not necessary to participate in the whole CEW Math Anxiety Program to register for these classes.

Arithmetic and Elementary Algebra \$35 Individualized instruction in basic arithmetic processes, fractions, decimals, exponents, percentages, setting up word problems into algebraic form. Each student proceeds at his/her own rate. Upon completion of course, student may receive 3 credits through testing for GC 1431 Fundamentals of College Mathematics. Additional fee required for credit.  
Mondays, 9:30-12:00 George McCutcheon & Vivian McMorro

\*GC 1445 Mathematics: Intermediate Algebra 5 cr \$77.50  
Concepts and manipulative skills of algebra in preparation for college algebra course. Topics include real number system, special products and factoring, exponents and radicals, linear equations in one and two variables, quadratic equations in one variable, progressions, inequalities, variation, and logarithms.  
Thursdays, 9:00-12:00 George McCutcheon

\*Math 1111 College Algebra and Analytic Geometry 5 cr \$77.50  
Functions and graphs, quadratic equations, progressions, inequalities, complex numbers, theory of equations, permutations and combinations, systems of equations, probability, determinants, graphing of linear and quadratic equations, conics in standard position, logarithms. (For students in social sciences, behavioral sciences, perbusiness administration, and others who require only some analytic geometry and college algebra without trigonometry.)  
Mondays and Wednesdays, 1:00-3:00

#### SUPPORTIVE SERVICES

Participants in the Math Anxiety Program are encouraged to take advantage of the following supportive services at no cost while enrolled in math classes.

Math Anxiety Support Group Sandra Davis, counselor at the University of Minnesota, will work with participants in examining their blocks in math, attitudinal change, test anxiety, and mechanisms to deal with math anxiety.

Every other Wednesday for six sessions beginning September 29, 11:00-12:30 at MacPhail. Final follow-up session January 19 at MacPhail.

Math Tutorial Tutorial services will be available Friday mornings at MacPhail, 9:00-12:00 beginning October 1

(For evening class Math Anxiety: Basic Math Review see page 20.)

## CREDIT COURSES

Acct 1050 Principles of Accounting 4 cr \$62 + \$3 lab fee  
Introduction to basic financial accounting concepts and application of these concepts to the recording and reporting of business transactions. No prereq. Limited.  
Th 9:00-12 MacPhail FALL SEMESTER Sept 30-Jan 20

\*AmSt 1101 (3111) American Life 4 cr \$62 First part of a three quarter series on American culture, an historical examination of the powerful and powerless as defined by the changing focus of developing and established institutions in our society. Art, religion and politics as sources of power and pleasure in Colonial and Revolutionary America will be the fall theme.  
Th 6:30-9 p.m. Edina Senior Community Center  
Patricia Davis

\*AmSt 1920 (3920) Topics: Movies and the American Experience  
4 cr \$62 Significant American films will be studied as both artistic and cultural statements. How the varied facets of film as an art form combine to produce a vision of various aspects of American life. Themes include individualism, the roles of men and women, and violence. Films tentatively scheduled are Birth of a Nation, Oct 7; Citizen Kane, Oct 21; The Big Sleep, Oct 28; She Wore a Yellow Ribbon, Nov 4; Bonnie and Clyde, Nov 11; Ballad Cable Hogue, Nov 18; The Last Picture Show, Dec 2.  
(Films are shown Thursdays, 7:30 p.m. in the Museum of Natural History, Minneapolis Campus East Bank.) Up to four free tickets may be picked up in 101 Westbrook Hall by students who show a receipted CEE registration form. No mail or telephone requests. Tickets for a particular film are available only during the week the film is shown.  
T 9:30-12 MacPhail Ralph Brauer

= AmSt 5401-02-03 ± Ideas in America 9 cr yr \$51 + \$5 special fee per quarter. Basic American concepts conditioning political thought examined in historical context; literature and art which have influenced the way we see and value social experience. Interdisciplinary faculty. Limited.  
Th 9:30-12 Coffman Memorial Union, Minneapolis Campus  
Clarke A. Chambers, Faculty Coordinator

\*Anth 3131 Religion and Culture 5 cr \$77.50 This course examines religious systems in a variety of other cultures as well as in our own culture. Emphasis is on the ritual process and relation of mythology to other aspects of culture such as sex roles, religious movements, the idea of taboo, and aspects of individual religious experiences. Student research on contemporary religious experience is encouraged.

W 9:30-12 MacPhail Jennette Jones

\*Anth 3502 Principles of Social and Cultural Anthropology 5 cr \$77.50 Within the framework of a general introduction to social and cultural anthropology, this course will focus on several themes. Case studies from different geographic areas and of different levels of socio-cultural complexity will be used to examine cultural diversity. Articles on cultures in transition in today's world will allow discussion of the dynamics of culture conflict and change. Particular attention will be given to the status of women in different societies. Films, lectures, class discussions and individual or group research projects.

M 9:30-12 MacPhail Christina Harrison

Arts 1701 Introduction to Photo Medium 4 cr \$62 + \$10 materials fee. Black and white photography for beginners. Camera techniques, film development. Time in darkroom. Limited.

M 9:00-12 MacPhail David Husom

Arts 3710 Intermediate Photography 4 cr \$62 + \$10 materials fee. Continued work in photographic controls and processes. Introduction to related photosensitive media. Emphasis on creative process with attention to individual interests and requirements. Prereq. Arts 1701. Limited.

T 9:00-12 MacPhail David Husom

\*Biol 1001 Heredity and Human Society 4 cr \$62 Principles of heredity and their social and cultural implications. Definitions of race, sex, intelligence, disease and behavior. Relationship of genetic makeup to behavior, behavior modification, and socialization. Non-technical approach. Course may be used to meet CLA distribution requirements.

T 1:00-3:30 MacPhail Val Woodward and Ossie Belton

Comp 0001 Introductory Composition \$62 Intensive drill on grammatical forms, structure, and theme writing. Recommended for those whose primary need is organization and development of themes. On instructor's recommendation students may receive 4 credits in Introductory Composition.

Fri 9:30-12 MacPhail Jane Resh Thomas

Comp 1001 Freshman Composition 4 cr \$62 Writing clearly and convincingly for college courses. Emphasizes writing for specific goals, pre-writing, theses statement, principles of organization, coherence, argumentation, and paragraph development. Satisfies freshman English requirement and is a prerequisite for many language skills courses.

M 9:30-12 MacPhail Norene Davis Roberts

Econ 1002 Principles of Microeconomics 4 cr \$62 Supply and demand; competition and monopoly; consumers, business and unions. Woman in the American economy. Note: Another course Econ 1001 (Principles of Macroeconomics) considers inflation, unemployment, GNP, money and banking, business cycles, and international trade. Econ 1001 will be offered spring semester, Feb-June. Econ 1001 is not a prerequisite for 1002.

M 9:30-12 MacPhail FALL SEMESTER Sept 27-Jan 17  
Garson Sher

=Engl 5641-42-43 ± Arts of Reading: Aspects of Narrative 9 cr yr \$51 + \$5 special fee per quarter. The story of story: an investigation into narrative. Types of story, fact and fiction; how a story works; narrative voice; written and oral narrative; lyric and drama, the absence of narrative; women's language in narrative. Interdisciplinary faculty. Limited.

T 9:30-12 MacPhail Calvin Kendall, Faculty Coordinator

\*Engl 5753 Literature and the Other Arts 4 cr \$68 An informal discussion of possible relationships of literature to a variety of art forms from concrete poetry to modern paintings, from book illustrations to music; how they influence one another and how their aesthetic and social roles are similar and different. Reasons and methods, both practical and theoretical, for artistic borrowing. Basic readings from English and American literature. Slides and music presented. No prereq.

Th 1:00-3:30 MacPhail Stephen Behrendt



\*Fren 1101 Beginning French 5 cr \$77.50 Emphasis will be on 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 students on a take-home basis.

M & Fri 12:30-2:30 MacPhail Jan Solberg

= FSOS 5240-40-40 ± The Art of Well Being 9 cr yr \$51 + \$5 special fee per quarter. Physical and mental health; nature of human relationships (family, work, social class, race); philosophy, ecology. Interdisciplinary faculty. Limited.  
W 9:30-12 MacPhail Richard Hey, Faculty Coordinator

GC 1471 Creative Problem Solving 4 cr \$62 Innovative techniques to help perceive and approach problems flexibly and imaginatively; heighten awareness of problems and challenges. Focus will be on personal creativity, group process and communication skills.  
T 9:30-12 Ramsey Community School Marie Panger

\*Hist 5264 Modern Russia 4 cr \$68 Eighteenth century background for modern Russia. May be applied toward CLA foreign language requirement, Route II. (Hist 5265 The Nineteenth Century will be offered winter quarter; Hist 5266 The fall of the Russian Monarchy; the revolutions and the Soviet Regime will be offered spring quarter.) No prereq.  
Th 9:30-12 MacPhail Theofanis Stavrou

= Hum 5021-22-23 ± New Worlds of Knowledge 9 cr yr \$51 + \$5 special fee per quarter. Development in recent years in the sciences, music, art and literature with emphasis on common problems and unifying concepts. Because this course is structured to cover a wide range of subject matter, the inter-relatedness of which will be developed through the the whole year, registration must be for all three quarters. Tuition payable each quarter. Inter-disciplinary faculty. Limited.  
W 9:30-12 MacPhail  
John Dennis Hurrell, Faculty Coordinator

\*MidE 3315 Contemporary Israeli Literature in Translation 4 cr \$62 Modern short stories and poetry. Works of Agnon, Yizhar, Hazaz, Yechoshua, Greenberg, Amihai, Pagis, and others. Alienation, crisis of faith, war, genocide, and freedom.  
T 9:30-12 St. Louis Park Jewish Community Center  
Jonathon Paradise

\*Mus 5950 Topics in Music: Listener Preparation 4 cr \$68 Analysis of forms and styles of music; selected readings, discussion and guided listening practice using recorded examples of music scheduled for concert halls, churches, clubs and neighborhoods during fall 1976. Emphasis on practical study routines for the active, involved concert goer. Tips on use of music facilities of public libraries; sources for advance information on music events; locating and evaluating recordings. For listeners with limited music training as well as more advanced.  
Fri 9:30-12 MacPhail Arnold Caswell

Psy 1001 General Psychology 5 cr \$77.50 Designed to orient the student to the field of psychology. Emphasis upon methods of investigating human behavior. Required for most other courses in psychology. No prereq.  
W 9:30-12 MacPhail FALL SEMESTER Sept 29-Jan 20  
Anne Goff

\*Psy 1003 Application of Psychology to Living 4 cr \$62 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.  
Th 9:30-12 MacPhail Keith Buckley

\*Soc 1001 Introduction to Sociology 4 cr \$62 Sociology analyzes the structure of human social experience, the main forces that hold groups together, and the conditions which transform social life. The course examines the shaping of human behavior through culture, interpersonal relationships, group organization, inter-group relationships, social stratification, conflict, population structure, and social change. The play of these social forces upon our lives and our place in history is examined by analyzing change in basic American institutions such as the family, urban life, education, political structure, and crime.  
T 9:30-12 MacPhail T. Allen Caine

\*Span 1104 Intermediate Spanish, Oral Approach: Interpretation of Modern Problems 4 cr \$62 + \$4 special fee. Emphasis on speaking and comprehension. Development of reading and writing skills based on materials dealing with current issues of concern. Grammar review, frequent compositions and oral presentations to build active and passive vocabulary. Language tapes will be available. Prereq. Span 1103 or 3 years of high school Spanish or equivalent.  
Th 1:00-4:00 MacPhail Janet Mobley

WoSt 3301 (5301) Woman: A Sense of Identity 4 cr \$62 (\$68) Laboratory learning experience through active individual participation. Self-awareness, self-affirmation, action. Communication, group skills, assertiveness training. No audits. Limited.

T 6:00-9:00 p.m. Nolte Center, Minneapolis Campus

Fri 9:00-12 MacPhail Center

\*WoSt 3302 Comparative Study of Women: Political Science Perspective 4 cr \$62 This course compares the status of American women with that of women in several other regions worldwide, examining women's handicaps and achievements in arts, sciences, and public affairs.  
W 1:00-3:30 MacPhail Theresa C. Smith

=WoSt 5701-02-03 ‡ Woman in America 9 cr yr \$51 + \$5 special fee per quarter. Role of women in American history; women in social studies; perceptions of women in literature, art; human sexuality, male and female "character", choice of family and career, etc. Interdisciplinary faculty. Limited.  
T 9:30-12 MacPhail  
Gayle Graham Yates, Faculty Coordinator.

## NONCREDIT COURSES

Advanced Assertiveness Training Continued work on personal situations calling for assertive behavior. Giving or receiving compliments, expressing anger, dealing with criticism, expressing care and concern. Prereq. Assertiveness Training I. Limited.

M 7:00-9 p.m. Oct 25-Nov 15 (4 sessions) \$25  
Nolte Center, Minneapolis Campus Jan Dolejsi .8 CEU

Fri 9:30-11:30 Oct 29-Nov 19 (4 sessions) \$25  
MacPhail Chris Hanson .8 CEU

Artists: Heroes From Europe's Past and America's Present  
Slide lectures and tour of Minneapolis Institute of Art.

M 9:30-12 Oct 11-Nov 29 (9 sessions) \$45  
Universalist Church Barbara Kaerwer

W 9:30-12 Oct 13-Dec 1 (9 sessions) \$45  
Griggs House Barbara Kaerwer

Assertiveness Training Learning to express one's beliefs, feelings and opinions in an honest, direct and appropriate way. Discussion of what distinguishes assertive behavior from nonassertive and aggressive behavior. Self assertion as a means of increasing effectiveness in interpersonal relationships. Class will emphasize participation, role playing and group support. Limited.

M 7:00-9 p.m. Sept 27-Oct 18 (4 sessions) \$25  
Nolte Center, Minneapolis Campus Jan Dolejsi .8 CEU

BB-T 12:00-1:00 Sept 28-Nov 16 (8 sessions) \$25  
American Institute of Banking Marty Lindall .8 CEU

BB-Fri 12:00-1:00 Oct 1-Nov 19 (8 sessions) \$25  
American Institute of Banking Sue Goldsmith .8 CEU

Fri 9:30-11:30 Oct 1-Oct 22 (4 sessions) \$25  
MacPhail Chris Hanson .8 CEU

M 6:30-8:30 p.m. Oct 4-Oct 25 (4 sessions) \$25  
St. Louis Park High School Kathy Loucks .8 CEU

Autobiographical Writing II \$20 Continuation of Autobiographical Writing I. Interested, new students are welcome. Designed for persons who want to write about themselves; about childhood experiences, early family life, growing up; about the changes and metamorphoses that have taken place. Students will be writing autobiographical sketches and memoirs. Writing will include poetry as well as prose.  
T 12:00-1:30 Sept 28-Nov 2 (6 sessions)  
MacPhail Tom Stern

Career Planning for Women \$35 (includes testing; does not include lunch) A one-day workshop for women who are entering or re-entering the employment market or changing careers. Designed to help each woman recognize her marketable talents, develop a realistic career goal, learn planning and decision making skills and identify current job alternatives. Includes self assessment techniques, personal goal setting, action plan for career development, interviews, resumes, employment outlook, EEO legislation and information sources. Limited.  
Sat 8:30-4:30 Oct 30 Nolte Center, Minneapolis Campus  
Jenny Innes and Arnold Kovarik

China in the Modern World: The Lotus Blossom Blooms \$40

A seminar dealing with the breakdown of the traditional Chinese system and its impact upon the Communist Party: why the Communists came to power; Maoism as an ideology; the Communist power structure; Chinese Communist economic and social policy; Chinese foreign policy. Looking at the way in which the Communists have tried to change or adapt to traditional modes.

T 9:30-12 Oct 12-Nov 16 (6 sessions)

Luther Hall Student Center, St. Paul

John Turner

The Cid: A Spanish Epic \$24 A story of a man who

envisioned the reconquest and unification of Spain for all Spaniards rather than for the reconquerors only; the conflict between Moslem and Christian Spain.

A close look at an historic figure who became a legend and represents the ultimate of Spanish idealism.

Fri 1:00-3:00 Oct 15-Nov 19 (6 sessions)

MacPhail Dorothy Rundorff

Color and Design I \$32 Creative activities that increase

awareness of importance of color and design on emotions, personal choice of clothes and interiors, sense of beauty. Topics include fashion, interior design, clothing selection and fine arts. Bring a scissors and pencil to the first class. Limited.

T 9:30-12 Oct 5-Nov 2 (5 sessions)

MacPhail Pauline Vandergraft

Color and Design II \$32 Principles of design. Emphasis

on harmony, balance, proportions and rhythm. Prereq. Color and Design I. Limited.

T 9:30-12 Nov 9-Dec 7 (5 sessions)

MacPhail Pauline Vandergraft

Communication: Speech Improvement, Speaking Skills \$25

Everyday good speech is stressed; no mannerisms, no affectation. Outlining and delivery of the short speech. Value of reading aloud. Personal development through self-knowledge and sharing ideas.

Th 10:00-11:30 Oct 28-Dec 16 (7 sessions)

MacPhail Selma L. Toy

The Creative Woman \$12 Creative examination of the changing, expanding roles of women today. Forces affecting these roles. How some roles might be redefined so women can become more fully functioning, creative people.

M 9:30-12 Sept 6 & 13 (2 sessions)

Jonathan Center Community Room Anita Makar

Creative Writing I Emphasizes characterization, plot, setting, denouement of fiction. Taught by Mpls. Tribune columnist Robert T. Smith. Limited.

Fri 1:00-2:00 Oct 8-Nov 12 (6 sessions) \$24

MacPhail Robert T. Smith

T 7:00-8:00 p.m. Oct 12-Nov 16 (6 sessions) \$24

St. Louis Park High School Robert T. Smith

Creative Writing II \$24 More creative writing.

Prereq. Creative Writing I. Limited.

Fri 2:00-3:00 Oct 8-Nov 12 (6 sessions)

MacPhail Robert T. Smith

Creative Writing III \$30 This is a special seminar for students who have had Creative Writing I and II with Robert T. Smith and who are working on special projects. Permission of instructor necessary for admittance. Limited.

W 1:00-2:00 Oct 13-Nov 17 (6 sessions)

MacPhail Robert T. Smith

Dealing With Anger \$25 Exploring your beliefs, fears and feelings regarding anger. Learning to express your anger assertively, to deal with your own anger and with the anger of others. Awareness, communication skills, group participation. Limited.

T 1:00-3:00 Sept 28-Oct 19 (4 sessions)

MacPhail Jan Taylor

The Drama of the Soap Operas \$30 Is the soap opera just a means of passing the time or ? Analyzing the attraction of the soap opera as an indicator of contemporary philosophies in American society.

W 9:30-11:30 Oct 6-Nov 24 (8 sessions)

Edina Senior Community Center Johanna Kheim

BB-European and American Detective Fiction \$18 Armchair  
detectives from all around the world grow more  
cosmopolitan each year and a range of detective fiction  
lends itself to broad and interesting discussion. Do  
you like the psychological twists of Simenon? Does  
the dour Inspector Beck from Sweden take you with him  
on his cases? Students will read the works of major  
contributors to 20th century detective fiction from  
all over the world--among them Agatha Christie,  
John D. McDonald, Emma Lathen, Ross McDonald.  
Th 12:05-12:50 Sept 30-Nov 18 (8 sessions)  
MacPhail Gretchen Tselos

Everyone's Guide to the Whole Library \$2.00 Introduction  
to basic components of a library with emphasis on the  
University libraries. For the student wishing to  
review library organization and a practical look at  
library resources.  
T 1:00-3:00 Oct 5 & 12 (2 sessions)  
West Bank Location, University of Minnesota  
Marcia Pankake

Fall at the Arboretum \$36 (\$14 per session) Three  
seminars focusing on special interest areas:  
Aug 19, Drying and preserving flowers. Sept 16,  
Planning and planting for next year's garden.  
Oct 14, Gardening indoors. Lunch not included in  
the fee but available in the Tea Room. Students may  
register for individual sessions. Limited.  
Th 9:30-2:30 Aug 19, Sept 16, Oct 14 (3 sessions)  
Landscape Arboretum Mervin C. Eisel

From Monarchy to Massachusetts Bay: Colonial American  
Literature Literature basic to an understanding of  
American ideas. A venture into the years before the  
Mayflower voyage, the religious and political  
controversies that turned dissentors into colonists.  
Journals, poetry, diaries and sermons will be read for  
personal and social history, theology, literary and  
educational aims. William Bradford, John Winthrop,  
Cotton Mather, Ann Bradstreet, Samuel Sewell, & others.  
M 9:30-11:00 Oct 4-Nov 22 (8 sessions) \$30  
MacPhail Joy King

Th 9:30-12 Oct 7-Nov 18 (7 sessions) \$40  
St. Paul College Club Joy King



How to Write a Research Paper \$15 Designed to prepare students who anticipate writing required class papers in college courses. Sessions cover basic skills in research paper writing. Questions from students involved with specific assignments are welcome. Topics include: what is a research paper? your role as researcher; how to begin; choosing a topic; uses of source material; footnotes, bibliography, and documentation; strategies of organization and development before you begin writing; what to do when you get stuck.

T & Th 1:00-2:30 Oct 5-Oct 14 (4 sessions)

MacPhail Norene Davis Roberts

BB-Interpersonal Communication Skills \$25 A communication skill-building course intended to make work, family and personal relationships more satisfying.

Participants learn and practice specific skills for interacting effectively with others. Skills learned in class are applied to out-of-class relationships. The consequences of their use are discussed in small groups. Limited.

W 12:00-1:00 Oct 6-Nov 24 (8 sessions)

American Institute of Banking Rita Phillips .8 CEU

Intimacy \$25 Exploring the beliefs, fears, feelings about being close to someone, about being lonely. Learning when and how one wants to be intimate. Awareness, communication skills, group participation. Limited.

T 1:00-3:00 Oct 26-Nov 16 (4 sessions)

MacPhail Jan Taylor

Introduction to Jungian Psychology and Dream

Interpretation \$36 Comprehensive survey of the major ideas of C. G. Jung, including the psyche, archetypes, individuation, male and female psychology and religion. Jung's theory of dreams and introduction to their interpretation.

M 10:00-12:00 Sept 27-Dec 6 (10 sessions)

Edina Senior Community Center Lynda Cowan

Introduction to Western Art History - Part I \$50 First in a three part series, this course will explore the origins of western art from pre-historic cave paintings to the rise of the great Gothic Cathedrals of the Middle Ages in France. (Parts II and III offered winter and spring.)  
Th 9:30-12 Sept 30-Dec 9 (10 sessions)  
MacPhail Roslye Ultan

The Joy of People \$35 Designed to expand the student's awareness of self and of others. The following topics will be covered: identity (the personality and the body); people (how you see them and how you interact with them); the future (learning new communication skills and setting personal goals). Class time will be divided into didactic and experiential portions. The didactic hour will be information giving and sharing. The experiential hour will be devoted to active learning, aided by the use of questionnaires, inventories, role-playing and problem solving exercises. Limited.  
W 10:00-12 Oct 13-Nov 17 (6 sessions)  
Woman's Club of Minneapolis Barbara Dorset

BB-Leadership Development \$30 Understanding leadership behavior. Examining different leadership styles. Assessing one's own leadership skills and building on strengths. The laboratory method of learning will be used. Limited.  
Th 12:00-1:00 Sept 30-Dec 9 (10 sessions)  
Burlington Northern Jan Dolejsi 1 CEU

Leadership in the Voluntary Community \$24 Workshop designed for members of boards, committees and staffs of volunteer organizations. Focus is on attitudes, behavior and skills for developing a shared approach to leadership in small groups. Includes discussion, structured experiences, in-depth simulation and observer feedback. Limited.  
W 1:00-3:00 Oct 13-Nov 17 (6 sessions)  
MacPhail Drusilla Cummins

Literary London \$35 Literary landmarks of London in their historical and geographical background. Shakespeare's London. The London of Fielding, Hogarth and Johnson. London in the 18th and 19th century novel. London in English poetry, an annotated reading. London in modern British fiction. All of the faculty members are thoroughly familiar with London. Whenever appropriate slides or other illustrative material will be used.

Th 10:00-12 Oct 14-Nov 18 (6 sessions)

Woman's Club of Minneapolis

Dennis Hurrell, Raymond McClure, Robert E. Moore, Gordon O'Brien, Peter Reed

BB-Management Skills for Men and Women \$30 Overview of management principles and practices, organizational development, management by objectives. Various functions of the manager's role within an organization. Attitudes, habits, communication skills, management by objectives and how these relate to one's role in an organization. Supplemented with practical experiences.

Th 12:00-1:00 Sept 30-Dec 9 (10 sessions)

American Institute of Banking Marie Panger 1 CEU

Management Skills for Women \$30 Overview of management principles and practices, organizational development, management by objectives. Special concerns of women moving into management. Various functions of the manager's role within an organization. Attitudes, habits, communication skills, management by objectives and how these relate to one's role in an organization. Supplemented with practical experiences.

W 7:00-9:00 p.m. Oct 6-Nov 3 (5 sessions)

Nolte Center, Minneapolis Campus Marie Panger 1 CEU

Math Anxiety: Basic Math Review \$30 Designed to make people comfortable with the use of basic arithmetic processes. Material to be covered includes fractions, decimals, exponents, percentages, setting up word problems into algebraic form. Math for everyday use.

T 7:00-8:30 p.m. Sept 28-Nov 30 (10 sessions)

St. Louis Park High School Brenda Michael

Message and the Medium \$42.50 (both days); \$28 (Sept 16 only) Two day workshop in journalistic writing, editing, lay-out, graphic processes. Includes practice and small workshop discussion. For those responsible for newsletters, program announcements and publicity.  
Th & Fri 8:15-2:30 Sept 16 & 17 (2 sessions)  
Health Sciences Unit 2, Room 2-520, Mpls. Campus  
Harold Wilson, Walter Brovald and others

Money Matters \$25 Basic information for intelligent, financial decision making. The less money you have the more important it is to make informed choices. The course covers credit and charge accounts; taxes; pensions and social security; insurance; wills and lawyers; banks; investments including mutual funds, Treasury bills, stocks and bonds.  
T 1:00-3:30 Sept 28-Nov 16 (8 sessions)  
MacPhail Jean Northrop Carey

Mysteries of the Mind: Psychic Phenomena \$32 Historical overview with emphasis on reasons for growing interest. Mediums (psychics or sensitives). Survival of the human personality after bodily death and out of the body experiences. Exploration of altered states of consciousness through ouiji boards, automatic writing, hypnosis. From the seance room into the laboratory; investigation of the beginnings of parapsychology. Psychokinesis, the "Geller" effect.  
Th 1:00-3:00 Oct 7-Nov 18 (7 sessions)  
MacPhail Eleanor McGill with Mulford Sibley, guest speaker

The New Voices: Contemporary American Poetry  
Investigation of major American poets, providing a sense of the direction that American poetry has taken since World War II. The rich variety and vitality of this new generation of writers has caused poetry to re-emerge as an important artistic force. Robert Lowell, Denise Levertov, Karl Shapiro, Adrienne Rich, Sylvia Plath, John Berryman.

BB-M 12:05-12:50 Oct 4-Nov 22 (8 sessions) \$20  
MacPhail Joy King

T 9:30-12 Oct 19-Dec 7 (8 sessions) \$45  
St. Paul Jewish Community Center Joy King

Oral History and You For persons interested in personal history projects. Oral history documents America's past. Focus will be on developing conversational skills, appropriate subjects, interviewing and sharing personal and colorful memories of life's events.

Th 1:00-2:30 Sept 30-Nov 18 (8 sessions) \$24  
MacPhail Gretchen Tselos

T 10:00-11:30 Oct 5-Nov 23 (8 sessions) \$24  
Edina Senior Community Center Gretchen Tselos

Organizational Communication An overview of the process of human behavior and communication within the organizational context. This overview would reflect the dynamic all encompassing role of communication in effective/ineffective organization. Students will explore the effective blending of the human potential and organizational structure as vital links in an organization.

W 7:30-8:30 a.m. Sept 15-Nov 17 (10 sessions) \$28  
Northwestern National Bank Southwest, NFC Cafeteria  
Marie Panger 1 CEU

BB-W 12:05-12:50 Sept 29-Dec 1 (10 sessions) \$28  
St. Paul City Hall, Room 707 Marie Panger 1 CEU

Orientation Day no charge (see inside front cover for full description)

Parenting the Adolescent \$25 Qualities of healthy adolescents, obstacles to development of these qualities, what we can do to enhance growth. Other topics include keeping self esteem as parents, principles of conflict resolution, special problem areas, importance of encouragement. Class members given ample opportunity for participation and suggestion of topics not listed.

T 9:30-12 Oct 5-Oct 26 (4 sessions)  
Minnetonka City Hall Miriam Pew

Period Architecture A study of period architectural styles. American renditions; Greek-Gothic revival to Frank Lloyd Wright. Some sessions held at homes reflecting the period discussed. Offered in cooperation with the Minnesota Historical Society.

M 9:30-12 Sept 27-Nov 1 (6 sessions) \$25  
Griggs House Charles Nelson and others

M 7:00-9:00 p.m. Sept 27-Nov 1 (6 sessions) \$25  
Griggs House Charles Nelson and others

Personal Development and Career Planning Personal awareness, self evaluation, communication skills, resume writing, job interviews, work and educational opportunities available and decision making. Analysis of situation, personal opportunities and choices.

Fri 9:30-12 Oct 1-Oct 29 (5 sessions) \$27.50  
Jonathan Center Community Room Margie Woodhouse

Fri 9:30-12 Nov 5-Dec 10 (5 sessions) \$27.50  
St. Louis Park Jewish Community Center Margie Woodhouse

Personal Development for Professional Women \$35 Sex role socialization and its implications for the professional woman. Examination of such issues as power, risk taking, goal setting, dependency, sexuality, rule following, and using transitions creatively. The workshop will combine lecture and experiential approaches to learning.

Th 6:30-9:30 p.m. Sept 30-Oct 21 (4 sessions)  
Nolte Center, Minneapolis Campus  
Diane Johnson and Christine Hunt 1.2 CEU

Physical Fitness and Relaxation \$16 + \$4 special fee  
Concepts and techniques of current exercise programs. Development of a personal exercise program. Emphasis is given to posture, relaxation and suitable activities to help persons function more effectively.

Th 10:00-11:30 Sept 30-Nov 18 (8 sessions)  
Edina Senior Community Center Alice Pickering

Pre-Revolutionary Russian Literature \$35 An overview of the ferment in pre-revolutionary Russian society through examination of the novels and plays of Dostoyevsky, Turgenev, Gorkey and Chekov.  
M 1:00-3:00 Oct 4-Nov 22 (8 sessions)  
MacPhail Johanna Kheim

Problem Solving A case study approach to problem solving: defining problems, examining alternatives, exploring and weighing consequences, choosing best solutions. Consensus seeking. Understanding human behavior. Conflict resolution.

BB-M & W 12:00-1:00 Sept 27-Oct 20 (8 sessions) \$25  
American Institute of Banking George Lindall .8 CEU

BB-M & Th 12:05-12:50 Oct 25-Nov 18 (8 sessions) \$25  
St. Paul City Hall, Room 707 George Lindall .8 CEU

Researching Your Family History \$15 Beginning steps in outlining personal genealogical research, including documentation with sources, procedures and charting ancestral lines. The last session will be held at the Minnesota Historical Society Reference Library.  
W 9:30-11:30 Oct 13-Nov 3 (4 sessions)  
Brookdale Covenant Church Patricia Harpole

Retreat - "Retreating and Recycling: The Economics and Politics of Disillusionment" Plan A, \$60; Plan B, \$83  
Subjects to be discussed include size and democracy, decentralization of economic power, possible limits on unbridled economic growth, the implications of the "politics of lowered expectations" for social welfare programs and for women and minority groups, and the political attitudes of the disenchanting. These topics will be considered from an American perspective, but they will also be treated when applicable to such countries as Britain, the Soviet Union and mainland China. (There will be time for recreation during the weekend.) Plan A includes meals and lodging, Saturday lunch through Sunday lunch; Plan B includes meals and lodging, Friday dinner through Sunday lunch.  
Sat & Sun Oct 9 & 10  
Cragun's on Pine Beach, Gull Lake, Brainerd  
Virginia Gray, Mel Gray, and John Turner

Small Business Management \$35 Emphasis on retail small business procedures. Includes planning, control, advertising, display and general management techniques. Designed for people involved or starting a small retail business.

M 6:30-8:30 p.m. Oct 4-Nov 15 (7 sessions)

St. Louis Park High School Linda Coffey

Small Group Interaction \$25 How to more effectively lead a meeting and participate in decision making groups. Structured experiences on group cooperation, conflict resolution, various roles in a group situation. Limited.

T 7:30-8:30 a.m. Oct 5-Nov 23 (8 sessions)

Tudor Court Cafeteria, Dain Tower Anita Makar .8 CEU

BB-Spanish for Fun and Travel \$20 Conversation for intermediate and advance students who wish to keep in touch with the language.

T 12:05-12:50 Sept 28-Nov 30 (10 sessions)

Minneapolis Campus Janet Mobley

Speaking Before Groups Increasing speaking and critical listening skills to become more effective in business and social interactions. Communication process, language, audience analysis, organization and outlining, evidence and proof. Emphasis on the need to be responsible and critical listeners, thinkers, and speakers. Limited.

BB-W 12:00-1:00 Sept 29-Dec 1 (10 sessions) \$30

Burlington Northern Sheila Watson 1 CEU

BB-Fri 12:00-1:00 Oct 1-Dec 10 (10 sessions) \$30

American Institute of Banking Sheila Watson 1 CEU



Study Skills Workshop \$30 for morning or afternoon workshop and final all day session; \$40 for both workshops and final all day session (includes material fee) A short program of orientation and practice in college-level reading and study techniques. I. Reading Workshop, Sept 20, 21, 22 (9:30-12:00) Visual training, paragraph interpretation, retention, critical reading, scanning, rate improvement. II. Study Skills Workshop, Sept 20, 21, 22 (1:00-3:00) Listening and notetaking practice, study methods. SQ3R and underlining time scheduling, memorizing, goal setting, library techniques preparing for and taking exams. III. Joint Session for Both Groups, Sept 23 (9:30-3:00) Skimming, improving concentration, self-reinforcing techniques.  
M,T,W,TH 9:30-12:00 and 1:00-3:00 Sept 20-Sept 23  
MacPhail David Wark

Time Management Determining how time is spent or wasted, priority setting for work and leisure, goal setting, scheduling and budgeting time. Emphasis on effective use of time; specific solution suggestions.

BB-T 12:00-1:00 Sept 28-Nov 16 (8 sessions) \$25 .8 CEU  
Target, IDS Center, Training Room, 7th Floor, Pat Kroll  
(This section designed particularly for those in managerial or supervisory positions.)

BB-Th 12:00-1:00 Sept 30-Nov 4 (6 sessions) \$20  
YWCA, St. Paul Patrick Kroll .6 CEU

Woman At Home For the woman who elects to stay at home to raise her family and wishes to develop and pursue other interests simultaneously. Focus is on establishing priorities, allocating time, developing and integrating personal activities with family. Instructor is author of Woman At Home.

T 9:30-11:30 Oct 12-Oct 26 (3 sessions) \$12  
St. Anthony Parkview Community Center Arlene Cardozo

T 1:00-3:00 Nov 2-Nov 16 (3 sessions) \$12  
White Bear Lake Library Arlene Cardozo

Women and Power \$20 The workshop will enable women to experience how they choose to use the power they have and to provide an opportunity to deal with their feelings about power. In addition the workshop will challenge each woman to re-examine her beliefs and values regarding power, to recognize the power she has, and to become more comfortable and effective in power situations. Limited.

T 6:30-9:30 p.m. Sept 28 & Oct 5 (2 sessions)  
Nolte Center, Minneapolis Campus Diane Johnson

Women Preparing for the Later Years \$20 Solving problems, different approaches to life's conflicts, increasing options, finding the frontiers and the resources. Students encouraged to develop a design for future living.

Fri 10:00-11:30 Oct 15-Nov 12 (5 sessions)  
Edina Senior Community Center Grace Warfield

Writing for Publication I \$36 Professional techniques of writing fiction and nonfiction for publication. Interviewing, approaching editors, marketing.

W 1:00-3:00 Sept 29-Nov 24 (9 sessions)  
MacPhail Ruth Peterman

## COURSES FOR WHICH C.E.U.'S ARE AWARDED

Advanced Assertiveness Training - Nolte Center  
Advanced Assertiveness Training - MacPhail  
Assertiveness Training - Nolte Center  
Assertiveness Training - AIB (Sept section)  
Assertiveness Training - AIB (Oct section)  
Assertiveness Training - MacPhail  
Assertiveness Training - St. Louise Park High School  
Interpersonal Communication Skills - AIB  
Leadership Development - Burlington Northern  
Management Skills for Men and Women - AIB  
Management Skills for Women - Nolte Center  
Organizational Communication - NW National Bank  
Organizational Communication - St. Paul City Hall  
Personal Development for Professional Women -  
Nolte Center  
Problem Solving - AIB  
Problem Solving - St. Paul City Hall  
Small Group Interaction - Tudor Court Cafeteria  
Speaking Before Groups - Burlington Northern  
Speaking Before Groups - AIB  
Time Management - Target, IDS Center  
Time Management - YWCA, St. Paul

## LOCATIONS OF COURSES

*American Institute of Banking, WCCO Radio Building,  
625 - 2nd Avenue South, Minneapolis*

BB-Assertiveness Training (Sept section)  
BB-Assertiveness Training (Oct section)  
BB-Interpersonal Communication Skills  
BB-Management Skills for Men and Women  
BB-Problem Solving  
BB-Speaking Before Groups

*Arboretum, State Highway 5, ½ mile W. of 41, Chaska*

Fall at the Arboretum

*Brookdale Covenant Church, 5139 Brooklyn Blvd, Minneapolis*

Researching Your Family History

*Burlington Northern, 176 East 5th Street, St. Paul*

BB-Leadership Development

BB-Speaking Before Groups

*Cragun's on Pine Beach, Gull Lake, Brainerd*

Retreat - "The New Conservatism

*Edina Senior Community Center, 7151 York Ave. S., Minneapolis*

AmSt 1101 (3111) American Life

The Drama of the Soap Operas

Introduction to Jungian Psychology and Dream  
Interpretation

Oral History and You

Physical Fitness and Relaxation

Women Preparing for the Later Years

*Griggs House, 432 Summit Avenue, St. Paul*

Artists: Heroes From Europe's Past and America's  
Present

Period Architecture (Morning section)

Period Architecture (Evening section)

*Jonathan Center Community Room, Lake Village Center  
Chaska*

The Creative Woman

Personal Development and Career Planning

*Luther Hall Student Center, 1407 Cleveland Avenue North,  
St. Paul*

China in the Modern World: The Lotus Blossom Blooms

*MacPhail Center, 1128 LaSalle Avenue, Minneapolis*

Acct 1050 Principles of Accounting

AmSt 1920 (3920) Topics: Movies and the American  
Experience

Anth 3131 Religion and Culture

Anth 3502 Principles of Social and Cultural  
Anthropology

MacPhail Center (continued from previous page)

- ArtS 1701 Introduction to Photo Medium
- ArtS 3710 Intermediate Photography
- Biol 1001 Heredity and Human Society
- Comp 0001 Introductory Composition
- Comp 1001 Freshman Composition
- Econ 1002 Principles of Microeconomics
- Engl 5641-42-43 Arts of Reading: Aspects of Narrative
- Engl 5753 Literature and the Other Arts
- Fren 1101 Beginning French
- FSoS 5240-40-40 The Art of Well Being
- Hist 5264 Modern Russia
- Hum 5021-22-23 New Worlds of Knowledge
- Mus 5950 Topics in Music: Listener Preparation
- Psy 1001 General Psychology
- Psy 1003 Application of Psychology to Living
- Soc 1001 Introduction to Sociology
- Span 1104 Intermediate Spanish, Oral Approach: Interpretation of Modern Problems
- WoSt 3301 (5301) Woman: A Sense of Identity
- WoSt 3302 Comparative Study of Women: Political Science Perspective
- WoSt 5701-02-03 Woman in America
- Advanced Assertiveness Training
- Assertiveness Training
- Autobiographical Writing II
- The Cid: A Spanish Epic
- Color and Design I
- Color and Design II
- Communication: Speech Improvement, Speaking Skills
- Creative Writing I
- Creative Writing II
- Creative Writing III
- Dealing With Anger
- BB-European and American Detective Fiction
- From Monarchy to Massachusetts Bay: Colonial American Literature
- How to Write a Research Paper
- Intimacy
- Introduction to Western Art History - Part I
- Leadership in the Voluntary Community
- Money Matters
- Mysteries of the Mind: Psychic Phenomena

*MacPhail Center (continued from previous page)*

BB-The New Voices: Contemporary American Poetry  
Oral History and You  
Pre-Revolutionary Russian Literature  
Study Skills Workshop  
Writing for Publication I

*Minnetonka City Hall, 14600 Minnetonka Blvd., Minnetonka*

Parenting the Adolescent

*Northwestern National Bank Southwest, NFC Cafeteria,  
7900 Xerxes Avenue South, Minneapolis*

Organizational Communication

*Ramsey Community School, 1 West 49th Street, Minneapolis*

GC 1471 Creative Problem Solving

*St. Anthony Parkview Community Center,  
33rd & Silver Lake Road N.E., St. Anthony*

Woman at Home

*St. Louis Park High School, 6425 W. 22rd Steet,  
St. Louis Park*

Assertiveness Training

Creative Writing I

Math Anxiety: Basic Math Review

Small Business Management

*St. Louis Park Jewish Community Center,  
4330 S. Cedar Lake Road, St. Louis Park*

MidE 3315 Contemporary Israeli Literature in  
Translation

Personal Development and Career Planning

*St. Paul City Hall, 15 West Kellogg, St. Paul*

BB-Problem Solving

BB-Organizational Communication

*St. Paul College Club, 990 Summit Avenue, St. Paul*

From Monarchy to Massachusettes Bay: Colonial  
American Literature

*St. Paul Jewish Community Center, 1375 St. Paul Avenue,  
St. Paul*

The New Voices: Contemporary American Poetry

*Target, IDS Center, 777 Nicollet Mall, Minneapolis*

BB-Time Management

*Tudor Court Cafeteria, Dain Tower, 527 Marquette, Mpls.*

Small Group Interaction

*Universalist Church, 50th & Girard Ave. S., Mpls.*

Artists: Heroes From Europe's Past and America's  
Present

*University of Minnesota - East Campus*

AmSt 5401-02-03 Ideas in America

WoSt 3301 (5301) Woman: A Sense of Identity

Advanced Assertiveness Training

Assertiveness Training

Career Planning for Women

Management Skills for Women

Message and the Medium

Orientation Day

Personal Development for Professional Women

BB-Spanish for Fun and Travel

Women and Power

*University of Minnesota - West Campus*

Everyone's Guide to the Whole Library

*White Bear Lake Library, 130 Clark Avenue, White Bear Lake*

Woman At Home

Woman's Club of Minneapolis, 410 Oak Grove St., Mpls.

The Joy of People  
Literary London

YWCA - St. Paul, 65 East Kellogg, St. Paul

BB-Time Management

*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, extra curricular and employment opportunities are available to all on an equal basis.*



Prompt registration is suggested. Last date for payment of tuition for credit classes without penalty of a late fee is September 17. Make checks payable to the University of Minnesota. A \$2 handling fee is charged for all checks returned by a bank. No arrangements for partial payment can be made. Students are not registered until their tuition and fees are paid. To avoid confusion, please state location(s) and starting date(s) of class(es) for which you are registering. For credit classes, please specify the type of grading preferred. Only courses with a first digit of 5 may be taken for graduate credit. If graduate credit is desired, please indicate by checking graduate credit on the form.

No mail registrations for non paying students over 62 will be accepted. Students over 62 must call 373-9743 three days before the beginning of the class to confirm that the class will be held and that they can be accommodated.

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Continuing Education for Women  
200 Westbrook Hall, University of Minnesota  
Minneapolis, Minnesota 55455

Please register me for the following class(es):

\_\_\_\_\_

\_\_\_\_\_

Location \_\_\_\_\_ Starting Date \_\_\_\_\_

For credit class(es), check one of the following:

A-N \_\_\_\_\_ S-N \_\_\_\_\_ Audit \_\_\_\_\_ Grad Credit \_\_\_\_\_

My check payable to the University of Minnesota for \$ \_\_\_\_\_ is enclosed.

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

SOCIAL SECURITY # \_\_\_\_\_

HOME PHONE \_\_\_\_\_ WORK PHONE \_\_\_\_\_

BIRTHDATE \_\_\_\_\_