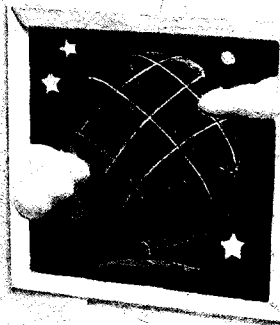
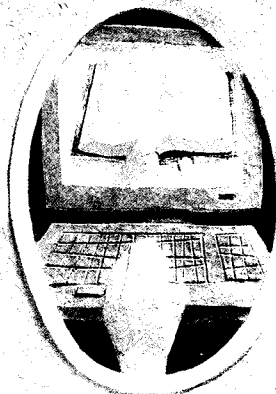


UNIVERSITY OF MINNESOTA

9580



**extension**  
CLASSES

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

## Extension Classes Information

101 Wesbrook Hall  
University of Minnesota  
77 Pleasant Street S.E.  
Minneapolis, Minnesota 55455  
Telephone 625-3333  
FAX 625-1511

## Counseling and Academic Advising

314 Nolte Center  
University of Minnesota  
315 Pillsbury Drive S.E.  
Minneapolis, Minnesota 55455  
Telephone 625-2500  
Internet (e-mail):  
CEEADV@mail.cee.umn.edu

Extension Classes Information and Registration Offices are generally open Monday through Thursday, 8 a.m. to 8 p.m., and Friday from 8 a.m. to 4:30 p.m. (For exceptions, see calendar pages, 6-11)

## Where to call: Extension phone numbers

|  |          |
|--|----------|
| Bulletin requests .....                                | 624-2388 |
| Cancellation Information .....                         | 625-3333 |
| Compleat Scholar/Practical Scholar .....               | 624-8880 |
| Continuing Education for Women .....                   | 624-5267 |
| Correspondence Courses (Independent Study) .....       | 624-0000 |
| Counseling .....                                       | 625-2500 |
| Degrees and Certificates .....                         | 625-2500 |
| Director .....   | 624-4062 |
| E-mail accounts .....                                  | 626-7676 |
| Extension Bulletin Request .....                       | 624-2388 |
| FAX (registration office) .....                        | 625-1511 |
| Information .....                                      | 625-3333 |
| Info Newsletter .....                                  | 624-3300 |
| Instructor Telephone Numbers .....                     | 625-3333 |
| Maps (Campus or Parking) .....                         | 624-2388 |
| Registration office .....                              | 625-3333 |
| Student Board .....                                    | 626-8501 |
| Television Classes .....                               | 624-0000 |
| Transcripts (Williamson Hall) .....                    | 625-5333 |
| Veterans Information .....                             | 625-8076 |
| <b>University Bookstores</b>                           |          |
| St. Paul Campus Bookstore .....                        | 624-9200 |
| Health Sciences Bookstore .....                        | 625-8600 |
| East Bank Bookstore (Williamson Hall, East Bank) ..... | 625-6000 |
| West Bank Bookstore .....                              | 625-3000 |
| <b>University phone numbers</b>                        |          |
| University Information .....                           | 625-5000 |
| Recreational Sports/Facilities .....                   | 625-6800 |
| Athletic Ticket Office .....                           | 624-8080 |
| Concerts and Lectures .....                            | 624-2345 |
| Day School (College) Bulletins .....                   | 625-2008 |
| Health Service .....                                   | 625-8400 |
| Libraries .....  | 624-4552 |
| Parking Information .....                              | 626-PARK |
| University Police .....                                | 624-3550 |
| University Theatre .....                               | 624-2345 |

Volume 97, Number 8

UNIVERSITY OF MINNESOTA  
(USPS 651-720)

July 3, 1995

Published by the University of Minnesota, Office of the Vice President for Student Affairs, Communications & Publications, 110 Williamson Hall, 231 Pillsbury Drive S.E., Minneapolis, MN 55455-0213; once in March and October; twice in April, June, August, and September; and three times in May and July. Second-class postage paid at Minneapolis, Minnesota. POSTMASTER: Send address changes to University of Minnesota, Extension Classes, 101 Wesbrook Hall, 77 Pleasant Street S.E., Minneapolis, MN 55455.

**Bulletin Use:** The information in this bulletin and other University bulletins, publications, or announcements is subject to change without notice. University offices can provide current information about possible changes.

**Alternative Formats:** This publication is available in alternative formats upon request. Please contact the Extension Classes Publications Office, 180 Wesbrook Hall, 77 Pleasant Street S.E., Minneapolis, MN 55455 (612/624-3300), for assistance.

**Tuition Policy:** The University of Minnesota has a policy for the way different groups of students pay for the courses they take: resident student and nonresident student. In addition, students taking 5xxx courses for graduate credit, or 8xxx courses, pay a separate graduate credit resident or nonresident rate. Each credit option is listed with each course in this bulletin as applicable.

**For complete information, read the section on How to Determine Tuition on page xxx.**



About the paper used in this bulletin: Butte des Morts Recycled Book contains 75% deinked recycled fiber, of which 10% is post-consumer waste.



# Quick Reference

(Also see the table of contents on the next page and the index at the back of this bulletin.)

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**You're invited!** Want to learn more about CEE/UC programs for adult and part-time learners? Attend EdFest, our open house this fall. Talk informally with advisers and program staff, pick up information materials, register for door prizes. Parking provided. Easy-to-get-to Nolte Center. Call 626-1633 for a recorded message, directions.

**Thursday • September 7 • 5 to 8 p.m. • Nolte Center, East Bank Campus**

**Tuesday • February 27 • 5 to 8 p.m. • Nolte Center, East Bank Campus**

Want to get started earlier? Attend a group information meeting led by CEE/UC Counseling department advisers. Sessions scheduled every week from mid-July through August. Call 624-0029 for dates and times and to reserve your space. (Also offered in November and February.)

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**About the bulletin cover**

This year's original cover art is the work of award-winning artist Alan Brunettin. A Chicago-based sculptor and painter, Brunettin works in clay using a bas-relief and oils technique. The "opening doors" theme is one long associated with the access that Continuing Education and Extension/University College provides to adult and part-time students. His art will appear on several CEE/UC publications during 1995-96. We in CEE/UC are pleased with the exciting, unique look he has created for us.

**Equal Opportunity**

The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation. In adhering to this policy, the University abides by the Minnesota Human Rights Act, Minnesota Statute Ch. 363; by the Federal Civil Rights Act, 42 U.S.C. 2000e; by the requirements of Title IX of the Education Amendments of 1972; by Sections 503 and 504 of the Rehabilitation Act of 1973; by the Americans With Disabilities Act of 1990; by Executive Order 11246, as amended; by 38 U.S.C. 2012, the Vietnam Era Veterans Readjustment Assistance Act of 1972, as amended; and by other applicable statutes and regulations relating to equality of opportunity. Inquiries regarding compliance may be directed to Patricia A. Mullen, Director, Office of Equal Opportunity and Affirmative Action, University of Minnesota, 419 Morrill Hall, 100 Church Street S.E., Minneapolis, MN 55455 (612/624-9547).

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# Earning credit

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## 9 Ways to earn credit at the University of Minnesota

There are many ways you can continue your education and receive credit for knowledge and skills gained in the classroom and outside the classroom. The CEE/UC Counseling department (625-2500) will provide further information on these options.

### **1. Extension Classes (including Continuing Education for Women)**

Register for University of Minnesota courses offered through Extension Classes. See page 12.

### **2. Independent Study Correspondence and Media-Assisted Courses**

You may earn credits by self-paced study. All course requirements can be completed by mail. See page 44.

### **3. Continuing Education for Women**

Continuing Education for Women offers daytime courses both on and off campus for credit. (Men are welcome in the classes too!) Telephone 624-5267. See page 395.

### **4. Credit by Examination**

Earn credit by examination in fields in which you have gained knowledge outside the classroom. See page 43.

### **5. CLEP Program**

You may earn credits by taking the College Level Examination Program (CLEP) examinations. See page 43.

### **6. Studying Independently**

You may register for "independent study"—a Y registration—and earn credits without attending class (subject to faculty approval). See page 42.

### **7. Extra Credit**

You may register for and earn extra credits—an X registration—in Extension courses (subject to faculty approval) if you are willing to do extra course work. See page 43.

### **8. Directed Study through University College**

You may earn up to 15 credits per quarter for a directed study project by registering for University College 3075. See page 44.

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

Earn credit by designing directed study and/or research projects around your job activities or involvement in the community (subject to faculty approval). One such program option is Research Explorations; or you may explore your own possibilities. See pages 43, 474.

## **From the dean**

*What's in a name? Eighty-two years ago, in 1913, the Regents of the University of Minnesota established the General Extension Division (GED) to extend the resources of this land grant institution to adult and part-time learners. In 1972, because of organizational restructuring, GED evolved into Continuing Education and Extension. Now, 23 years later, another name change for CEE is on the horizon.*

*As the University of Minnesota strives to achieve the goals established for "U2000," a long-range planning effort, CEE will be challenged to serve the adult learner in new ways. With that in mind, CEE will be renamed Continuing Education and Extension/University College for the 1995-96 academic year and in 1996 become known as University College. What does this change signify? CEE/UC will create and make available more University of Minnesota undergraduate and graduate degree programs for adult and part-time students. We will offer more work-related certificate programs and professional development opportunities. New learning formats such as distance-education courses, taken via interactive television or the Internet, will be available to students. We're excited about the changes and the opportunity to serve better the educational needs of you—the part-time learner.*

*So what's in a name? In the case of Continuing Education and Extension/University College, it's an 82-year-old tradition of, and commitment to, serving the adult part-time student. Just glance through this Extension Classes Bulletin of credit and noncredit classes and you'll see what I mean.*

**Harold A. Miller**

*Dean, Continuing Education and Extension/  
University College*

## **From the director**

*There are many advantages of living in or near the Twin Cities metropolitan area. The area has long been recognized as one that has great access to the performing arts. The sports menu is full, all the way from youth sports to professional sports. There are many opportunities to enjoy nature, and those opportunities are enhanced by the annual parade of the theatre of seasons.*

*Educational opportunities are also plentiful, both credit and noncredit, from community education to graduate education. And you just happen to have a world-class university in your backyard—the University of Minnesota. Those of us who work in Extension Classes are dedicated to making the educational resources of the University of Minnesota available to you in every way that we can. The courses and programs that you will find in this bulletin include a great range of educational opportunities that are available to you.*

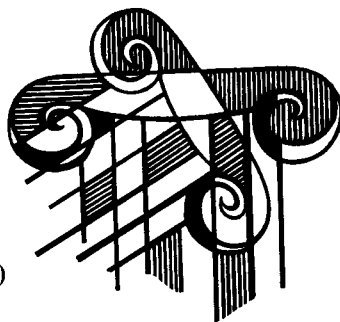
*These opportunities have expanded during the last two years with three new University of Minnesota degrees. The Bachelor of Information Networking (in cooperation with North Hennepin Community College) and the Bachelor of Applied Business (in cooperation with Inver Hills Community College) are now available to you. In addition, the Master of Liberal Studies is a new graduate degree available through Extension Classes. More information about these new degree programs can be found in the Degrees and Certificates section of this bulletin.*

*If you started your education several years ago, perhaps the time has come to continue on that journey. If you haven't started, we're here to help you. You'll find many students here who have walked in your shoes.*

**John S. Malmberg**

*Director, Extension Classes*

# Calendar, Office Hours



## Fall Quarter 1995 and Fall Special Terms

**CALENDAR (includes summer and fall dates/hours)**

**Fall quarter term dates**

Sept. 21 (Thursday)—Dec. 9 (final exams Dec. 4-9)

**Office hours, holidays, special hours (101 Wesbrook Hall)**

June 12-July 28 8 a.m.-6:30 p.m., M-Th; 8 a.m.-4:30 p.m., F  
 July 31-Aug. 11 8 a.m.-4:30 p.m., M-F  
 Aug. 14-Dec. 8 8 a.m.-8 p.m., M-Th; 8 a.m.-4:30 p.m., F  
     Aug. 19 9 a.m.-1 p.m., Sa  
     Sept. 4 Labor Day (closed)  
     Sept. 30 9 a.m.-1 p.m., Sa  
     Nov. 18 9 a.m.-1 p.m., Sa  
     Nov. 23-24 Thanksgiving (closed)  
 Dec. 11-Dec. 29 8 a.m.-4:30 p.m., M-F  
     Dec. 25-26 Christmas (closed)  
     Jan. 1 New Year's Day (closed)

**MacPhail Center in-person registration dates/hours (1128 LaSalle Ave., downtown Mpls)**

Aug. 14-Sept. 13 8:30 a.m.-6 p.m., M-Th; 8:30 a.m.-4:30 p.m., F

**St. Paul Skyway Registration Booth dates/hours (Norwest Center, Fifth and Minnesota)**

Sept. 5-13 9 a.m.-5 p.m., M-F

**All offices closed weekends (except Saturdays noted) and holidays.**

| JULY 1995    |    |    |    |    |    |    | AUGUST 1995   |    |    |    |    |    |    | SEPTEMBER 1995 |   |   |    |    |    |    |    |    |    |    |
|--------------|----|----|----|----|----|----|---------------|----|----|----|----|----|----|----------------|---|---|----|----|----|----|----|----|----|----|
| S            | M  | T  | W  | T  | F  | S  | S             | M  | T  | W  | T  | F  | S  | S              | M | T | W  | T  | F  | S  |    |    |    |    |
|              |    |    |    |    | 1  |    |               |    | 1  | 2  | 3  | 4  | 5  |                |   |   |    | 1  | 2  |    |    |    |    |    |
| 2            | 3  | 4  | 5  | 6  | 7  | 8  | 6             | 7  | 8  | 9  | 10 | 11 | 12 |                |   |   |    | 3  | 4  | 5  | 6  | 7  | 8  | 9  |
| 9            | 10 | 11 | 12 | 13 | 14 | 15 | 13            | 14 | 15 | 16 | 17 | 18 | 19 |                |   |   |    | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 16           | 17 | 18 | 19 | 20 | 21 | 22 | 20            | 21 | 22 | 23 | 24 | 25 | 26 |                |   |   |    | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 23           | 24 | 25 | 26 | 27 | 28 | 29 | 27            | 28 | 29 | 30 | 31 |    |    |                |   |   |    | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 30           | 31 |    |    |    |    |    |               |    |    |    |    |    |    |                |   |   |    |    |    |    |    |    |    |    |
| OCTOBER 1995 |    |    |    |    |    |    | NOVEMBER 1995 |    |    |    |    |    |    | DECEMBER 1995  |   |   |    |    |    |    |    |    |    |    |
| S            | M  | T  | W  | T  | F  | S  | S             | M  | T  | W  | T  | F  | S  | S              | M | T | W  | T  | F  | S  |    |    |    |    |
|              |    |    |    |    |    | 1  |               |    |    |    |    | 1  | 2  | 3              | 4 |   |    |    |    |    |    | 1  | 2  |    |
| 1            | 2  | 3  | 4  | 5  | 6  | 7  | 5             | 6  | 7  | 8  | 9  | 10 | 11 |                |   |   |    | 3  | 4  | 5  | 6  | 7  | 8  | 9  |
| 8            | 9  | 10 | 11 | 12 | 13 | 14 | 12            | 13 | 14 | 15 | 16 | 17 | 18 |                |   |   |    | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 15           | 16 | 17 | 18 | 19 | 20 | 21 | 19            | 20 | 21 | 22 | 23 | 24 | 25 |                |   |   |    | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 22           | 23 | 24 | 25 | 26 | 27 | 28 | 26            | 27 | 28 | 29 | 30 |    |    |                |   |   | 24 | 25 | 26 | 27 | 28 | 29 | 30 |    |
| 29           | 30 | 31 |    |    |    |    |               |    |    |    |    |    |    |                |   |   | 31 |    |    |    |    |    |    |    |

## FALL QUARTER

### IMPORTANT DATES

#### Registration

- Aug. 1 Mail and FAX registration begins for classes listed in this bulletin  
Aug. 14 In-person registration begins on campus and at MacPhail for all classes  
(evening, day; dual registration by day school students)  
Sept. 5-13 In-person registration at St. Paul Skyway  
Sept. 13 Last day to register without a late fee  
Sept. 14 Late registrations must include \$5 late fee  
Sept. 21 Classes begin  
Oct. 2 Late registrations must include \$10 late fee  
Oct. 9 Late registrations must include \$20 late fee  
Nov. 6 Late registration requires scholastic committee approval

Registration after the first week of the term requires approval of instructor. See Late Registration and Additions, page 13.

#### Cancellation, refunds, change in registration

- Sept. 30 Last day to cancel and receive 100% refund\*  
Oct. 6 Last day to change grade base (A/F or S/N)  
Oct. 11 Last day to cancel and receive 50% refund  
Oct. 28 Last day to cancel and receive 25% refund  
Oct. 30 No refunds given  
Nov. 3 Last day to cancel and receive automatic "W"; cancellation requires  
scholastic committee approval after this date  
Dec. 1 Last day to add or drop graduate credit status

\*Refund dates and amounts apply to returning and continuing students; new students have a more detailed refund schedule. See Refunds, page 50.

See Rules and Regulations for requirements on cancel/add (transfer) of classes (page 48), cancellations (page 49), and refunds (page 50).



# Winter Quarter 1996

## and Winter Special Terms

**CALENDAR (includes office hours for winter registration and term)**

**Winter quarter term dates**

Jan. 2 (Tuesday)—Mar. 18 (Monday)  
(final exams Mar. 12-18)

**Office hours, holidays, special hours (101 Wesbrook Hall)**

|                |  |
|----------------|--|
| Nov. 1-Dec. 8  | 8 a.m.-8 p.m., M-Th; 8 a.m.-4:30 p.m., F           |
| Nov. 18        | 9 a.m.-1 p.m., Sa                                  |
| Nov. 23-24     | Thanksgiving (closed)                              |
| Dec. 11-Jan. 1 | 8 a.m.-4:30 p.m., M-F                              |
| Dec. 25-26     | Christmas (closed)                                 |
| Jan. 1         | New Year's Day (closed)                            |
| Jan. 2-Mar. 18 | 8 a.m.-8 p.m., M-Th; 8 a.m.-4:30 p.m., F           |
| Jan. 15        | Martin Luther King, Jr., Day (closed)              |
| Feb. 24        | 9 a.m.-1 p.m., (Sa)                                |
| Mar. 5         | Caucus night (no class after 6 p.m.; offices open) |
| Mar. 19-21     | 8 a.m.-4:30 p.m., T-Th                             |
| Mar. 22        | Floating holiday (all offices closed)              |

**MacPhail Center in-person registration dates/hours (1128 LaSalle Ave., downtown Mpls)**

Nov. 13-Dec. 13 8:30 a.m.-6 p.m, M-Th; 8:30 a.m.-4:30 p.m., F

**St. Paul Skyway Registration Booth dates/hours (Norwest Center, Fifth and Minnesota)**

Dec. 5-13 9 a.m.-5 p.m., M-F

**All offices closed weekends (except Saturdays noted) and holidays.**

| NOVEMBER 1995 |    |    |    |    |    |    | DECEMBER 1995 |    |    |    |    |    |    | JANUARY 1996 |    |    |    |    |    |    |
|---------------|----|----|----|----|----|----|---------------|----|----|----|----|----|----|--------------|----|----|----|----|----|----|
| S             | M  | T  | W  | T  | F  | S  | S             | M  | T  | W  | T  | F  | S  | S            | M  | T  | W  | T  | F  | S  |
|               |    |    | 1  | 2  | 3  | 4  |               |    |    |    | 1  | 2  |    |              | 1  | 2  | 3  | 4  | 5  | 6  |
| 5             | 6  | 7  | 8  | 9  | 10 | 11 | 3             | 4  | 5  | 6  | 7  | 8  | 9  | 7            | 8  | 9  | 10 | 11 | 12 | 13 |
| 12            | 13 | 14 | 15 | 16 | 17 | 18 | 10            | 11 | 12 | 13 | 14 | 15 | 16 | 14           | 15 | 16 | 17 | 18 | 19 | 20 |
| 19            | 20 | 21 | 22 | 23 | 24 | 25 | 17            | 18 | 19 | 20 | 21 | 22 | 23 | 21           | 22 | 23 | 24 | 25 | 26 | 27 |
| 26            | 27 | 28 | 29 | 30 |    |    | 24            | 25 | 26 | 27 | 28 | 29 | 30 | 28           | 29 | 30 | 31 |    |    |    |
|               |    |    |    |    |    |    | 31            |    |    |    |    |    |    |              |    |    |    |    |    |    |

| FEBRUARY 1996 |    |    |    |    |    |    | MARCH 1996 |    |    |    |    |    |    |
|---------------|----|----|----|----|----|----|------------|----|----|----|----|----|----|
| S             | M  | T  | W  | T  | F  | S  | S          | M  | T  | W  | T  | F  | S  |
|               |    |    | 1  | 2  | 3  |    |            |    |    | 1  | 2  |    |    |
| 4             | 5  | 6  | 7  | 8  | 9  | 10 | 3          | 4  | 5  | 6  | 7  | 8  | 9  |
| 11            | 12 | 13 | 14 | 15 | 16 | 17 | 10         | 11 | 12 | 13 | 14 | 15 | 16 |
| 18            | 19 | 20 | 21 | 22 | 23 | 24 | 17         | 18 | 19 | 20 | 21 | 22 | 23 |
| 25            | 26 | 27 | 28 | 29 |    |    | 24         | 25 | 26 | 27 | 28 | 29 | 30 |
|               |    |    |    |    |    |    | 31         |    |    |    |    |    |    |



## WINTER QUARTER

### IMPORTANT DATES

#### Registration

- Nov. 1 Mail and FAX registration begins for classes listed in this bulletin  
Nov. 13 In-person registration begins on campus and at MacPhail for all classes  
(eveing, day; dual registration by day school students)  
Dec. 5-13 In-person registration at St. Paul Skyway  
Dec. 13 Last day to register without a late fee  
Dec. 14 Late registrations must include \$5 late fee  
Jan. 2 Classes begin  
Jan. 8 Late registrations must include \$10 late fee  
Jan. 15 Late registrations must include \$20 late fee  
Feb. 12 Late registration requires scholastic committee approval

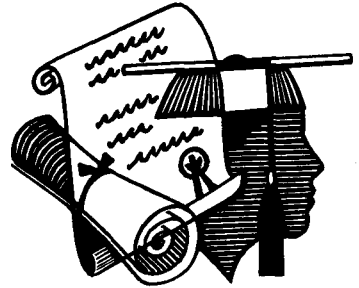
Registration after the first week of the term requires approval of instructor. See Late Registration and Additions, page 13.

#### Cancellation, refunds, change in registration

- Jan. 8 Last day to cancel and receive 100% refund\*  
Jan. 12 Last day to change grade base (A/F or S/N)  
Jan. 17 Last day to cancel and receive 50% refund  
Feb. 5 Last day to cancel and receive 25% refund  
Feb. 6 No refunds given  
Feb. 9 Last day to cancel and receive automatic "W"; cancellation requires  
scholastic committee approval after this date  
Mar. 11 Last day to add or drop graduate credit status

\*Refund dates and amounts apply to returning and continuing students; new students have a more detailed refund schedule. See Refunds, page 50.

See Rules and Regulations for requirements on cancel/add (transfer) of classes (page 48), cancellations (page 49), and refunds (page 50).



# Spring Quarter 1996 and Spring Special Terms

**CALENDAR (includes office hours for winter registration and term)**

**Spring Quarter term dates**

Mar. 25—June 8 (final exams June 3-8)

**Office hours, holidays, special hours (101 Wesbrook Hall)**

- Jan. 2-Mar. 18      8 a.m.-8 p.m., M-Th; 8 a.m.-4:30 p.m., F
- Jan. 15          Martin Luther King, Jr., Day (closed)
- Feb. 24          9 a.m.-1 p.m., (Sa)
- Mar. 5            Caucus night (no class after 6 p.m.; offices open)
- Mar. 19-21         8 a.m.-4:30 p.m., T-Th
- Mar. 22            Floating holiday (all offices closed)
- Mar. 25-June 8    8 a.m.-8 p.m., M-Th; 8 a.m.-4:30 p.m, F
- May 27          Memorial Day observed

**MacPhail Center in-person registration dates/hours (1128 LaSalle Ave., downtown Mpls)**

Feb. 21-Mar. 13      8:30 a.m.-6 p.m, M-Th; 8:30 a.m.-4:30 p.m., F

**St. Paul Skyway Registration Booth dates/hours (Norwest Center, Fifth and Minnesota)**

Mar. 5-13            9 a.m.-5 p.m., M-F

**All offices closed weekends (except Saturdays noted) and holidays.**

|  |  |   |
|--|--|---|
| <p><b>JANUARY 1996</b></p> <p>S M T W T F S</p> <p>1 2 3 4 5 6</p> <p>7 8 9 10 11 12 13</p> <p>14 15 16 17 18 19 20</p> <p>21 22 23 24 25 26 27</p> <p>28 29 30 31</p> | <p><b>FEBRUARY 1996</b></p> <p>S M T W T F S</p> <p>1 2 3</p> <p>4 5 6 7 8 9 10</p> <p>11 12 13 14 15 16 17</p> <p>18 19 20 21 22 23 24</p> <p>25 26 27 28 29</p>  | <p><b>MARCH 1996</b></p> <p>S M T W T F S</p> <p>1 2</p> <p>3 4 5 6 7 8 9</p> <p>10 11 12 13 14 15 16</p> <p>17 18 19 20 21 22 23</p> <p>24 25 26 27 28 29 30</p> <p>31</p> |
| <p><b>APRIL 1996</b></p> <p>S M T W T F S</p> <p>1 2 3 4 5 6</p> <p>7 8 9 10 11 12 13</p> <p>14 15 16 17 18 19 20</p> <p>21 22 23 24 25 26 27</p> <p>28 29 30</p>      | <p><b>MAY 1996</b></p> <p>S M T W T F S</p> <p>1 2 3 4</p> <p>5 6 7 8 9 10 11</p> <p>12 13 14 15 16 17 18</p> <p>19 20 21 22 23 24 25</p> <p>26 27 28 29 30 31</p> | <p><b>JUNE 1996</b></p> <p>S M T W T F S</p> <p>1</p> <p>2 3 4 5 6 7 8</p> <p>9 10 11 12 13 14 15</p> <p>16 17 18 19 20 21 22</p> <p>23 24 25 26 27 28 29</p> <p>30</p>     |

# SPRING QUARTER

## IMPORTANT DATES

### Registration

- Feb. 1 Mail and FAX registration begins for classes listed in this bulletin  
Feb. 21 In-person registration begins on campus and at MacPhail for all classes  
(evening, day; dual registration by day school students)  
Mar. 5-13 In-person registration at St. Paul Skyway  
Mar. 13 Last day to register without a late fee  
Mar. 14 Late registrations must include \$5 late fee  
Mar. 25 Classes begin  
Apr. 1 Late registrations must include \$10 late fee  
Apr. 8 Late registrations must include \$20 late fee  
May 6 Late registration requires scholastic committee approval

Registration after the first week of the term requires approval of instructor. See Late Registration and Additions, page 13.

### Cancellation, refunds, change in registration

- Mar. 30 Last day to cancel and receive 100% refund\*  
Apr. 5 Last day to change grade base (A/F or S/N)  
Apr. 10 Last day to cancel and receive 50% refund  
Apr. 27 Last day to cancel and receive 25% refund  
Apr. 29 No refunds given  
May 3 Last day to cancel and receive automatic "W"; cancellations require  
scholastic committee approval after this date  
May 31 Last day to add or drop graduate credit status

\*Refund dates and amounts apply to returning and continuing students; new students have a more detailed refund schedule. See Refunds, page 50.

See Rules and Regulations for requirements on cancel/add (transfer) of classes (page 48), cancellations (page 49), and refunds (page 50).

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# Registration instructions

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## How to register by mail, FAX, or in person

Read through these procedures carefully before you register! Correct registration is your responsibility. If you have questions after reading the information on registration procedures, call 625-3333.

**1. Use the registration form found at the back of this bulletin (photocopies acceptable).**

Forms and information are also available at the registration office in 101 Wesbrook Hall on the Minneapolis campus (east bank) of the University of Minnesota.

**2. Complete the registration form giving all the requested information.**

Personal information is necessary for records keeping. You will be assigned a University I.D. number the first time you register (be sure to include this number on registration forms in the future).

Each course description in this bulletin provides information necessary in completing the registration form. Courses are listed under departmental or subject heading (alphabetically arranged); where several classifications are possible, cross references are given. Complete the spaces on the form that request information about the course. See the sample course description on page 16.

**3. Pay tuition and fees. You are not registered until your tuition and fees are paid in full.**

All tuition and fees are due when you register (except for students whose tuition is billed through STARS). The full amount of tuition and fees is listed with each course. Add appropriate late fees if you are registering after late-fee deadlines (see page 13). Payment options include check, money order, cash (in person only), credit card (VISA, MasterCard, Discover).

If you are classified as a nonresident/nonreciprocity student, you must pay the nonresident tuition rate given with the course. See page 24 to determine the tuition rate that applies to you.

**4. Submit your registration form (with payment) by mail, FAX, or in person.**

See the registration dates and other deadlines for each term on pages 6-11. Registrations received by mail or FAX before mail registration begins will not be accepted.

• Mail (or drop off) registrations with payment by check, money order, or credit card or billing authorization to the address below. Make checks to *University of Minnesota*. Include a separate check for each class that has a limit.

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

• FAX registrations to (612) 625-1511. Put your name and I.D. number or SSN on each page. Payment must be by credit card or billing authorization.

• Register in person at the following locations (dates vary by location):

|                          |                      |                     |
|--------------------------|----------------------|---------------------|
| Extension Classes        | MacPhail Center      | St. Paul Skyway     |
| Main Registration Office | 1128 LaSalle Ave.    | Registration Booth  |
| 101 Wesbrook Hall        | Downtown Minneapolis | Norwest Center      |
| East Bank Campus         |                      | Fifth and Minnesota |

Day school students admitted to degree programs (only) may self-register at other campus registration offices, also, during in-person registration.

**5. Retain your fee statement (confirmation of enrollment).**

If you register in person, you will receive a fee statement at the registration office. Fee statements are mailed to students who mail or FAX in their registrations. The fee statement will list any changes in course information (such as room/bldg). Your fee statement is proof of enrollment and is required to use University libraries and other student services. Duplicates are available from the registration office.

### Alternate choice courses and sections

Students who are registering by mail are urged to include acceptable alternative sections or courses in the space indicated on the registration form. If the class you want to register for is closed, the Extension registration office will select the first available alternate choice listed and process the registration. (Include registration forms and tuition only for your first choice.)

### Closed classes

Limited-enrollment classes for which there is heavy demand will often reach the maximum limit and close.

No waiting lists are kept for Extension classes. If students have unusual and compelling reasons to be admitted to a closed class, they may state their case to the instructor of the class. **Written** permission of the instructor is required for admission to any closed class. These students are not charged a late fee through the first week of class.

Some departments have a strict policy against exceeding class limits; a note appears near the beginning of the department's course listings.

### Early registration permission

Extension students who are nearing the completion of their degree or certificate program from the University need a **required** course may obtain special permission to register early for a specific course if it has limited enrollment. This request must be made at least two weeks prior to the start of mail registration for the term in which you wish to register. Contact the CEE/UC Counseling department at 625-2500 for information on procedures.

### Late registration and additions

A separate late fee applies to each course you are registering for. The late fee deadline is determined by the postmark for mailed-in registrations and by the date received if received by FAX, in-person, or campus mail.

All registrations made in a regular-term class after the first week of the term must be accompanied by the written permission of the instructor. The schedule for late fees is given below.

For special term and special classes, any late registrations accepted after the first class must be accompanied by the written permission of the instructor. Late fees will be based on when the registration is received and how many times the class meets.

Late fees apply to all classes and all registrations, including audits, except for persons 62 and older registering under reduced-tuition options.

#### Late registration deadlines

|   | <u>FQ</u> | <u>WQ</u> | <u>SQ</u> |
|---|-----------|-----------|-----------|
| Through the first week of classes,<br>\$5 (if accepted)   | Sept. 30  | Jan. 6    | Mar. 30   |
| Through the second week of classes,<br>\$10 (if accepted) | Oct. 7    | Jan. 13   | Apr. 6    |
| After the above dates, \$20 (if accepted)                 |           |           |           |

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## Registration

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**Registration is not permitted without scholastic committee approval after the following dates:**

Fall quarter: November 3  
Winter quarter: February 9  
Spring quarter: May 3

Students can obtain a petition form at the Extension Classes Registration Office, 101 Wesbrook Hall (625-3333), or at CEE/UC Counseling, 314 Nolte Center (625-2500). Approval of registration after these deadlines is rare and given only in cases of extenuating circumstances, usually beyond the student's control. Contact an adviser in the CEE/UC Counseling department early in the quarter to discuss options if you have questions.

Late fees cannot be included in or billed for registration with authorizations (unless specifically authorized by the employer or agency); Regents' Scholarships; Tuition Assistance Program grants; or under Public Law 894, military personnel on Off-Duty Academic Instruction. *They must be paid personally by the student.*

The late fee for Compleat Scholar/Practical Scholar noncredit courses is \$5; late fee dates are usually given with each course.

Late fees are not refundable.

### **Additional information about registering in Extension Classes**

#### *Your registration*

Group information sessions are offered throughout the year by the CEE/UC Counseling department. These optional sessions are designed for students new to Extension Classes and to the University; they focus on general requirements, degree program admission, and registration options. Limited information on transfer of credit and financial aid will also be available. For more information or to sign up, call 624-0029.

Birth dates and social security numbers are requested for coding purposes and transcript identification. By supplying these numbers, you help insure that your grades and credits are recorded correctly and our mailing list is kept accurate.

The following information requested on your registration form is defined as private data under state and/or federal laws: birth date, sex, social security number, and University of Minnesota identification (I.D.) number. In general, this information may not be released to others without your consent or a court order. The intended use of the requested information is to identify you in relation to other students' records. Disclosure of this information is voluntary.

Students who have not received fee statements within seven working days after mailing in registration forms and tuition payment should call 625-3333 to check whether the registration was received and processed. Students should assume they are registered unless notified otherwise. Registrations that cannot be processed for some reason are returned immediately (except for illegible copies).

#### *Courses*

Limited-enrollment sections have specified limits on the number of students that will be permitted into the class. These sections are starred next to the section number. The limit is given with the course description in most cases. Early registration by mail is the best way to obtain space in limited-enrollment sections.

When registering by mail, include a separate check for each class that has a limit; this facilitates registration processing if one of your classes is filled or canceled.

In rare cases, it may be necessary to place enrollment limits on nonlimited sections.

Registrations received by mail or FAX in the Extension registration office are processed on a daily basis. Once in-person registration begins, spaces in limited-enrollment classes also will be assigned to students who register in person.

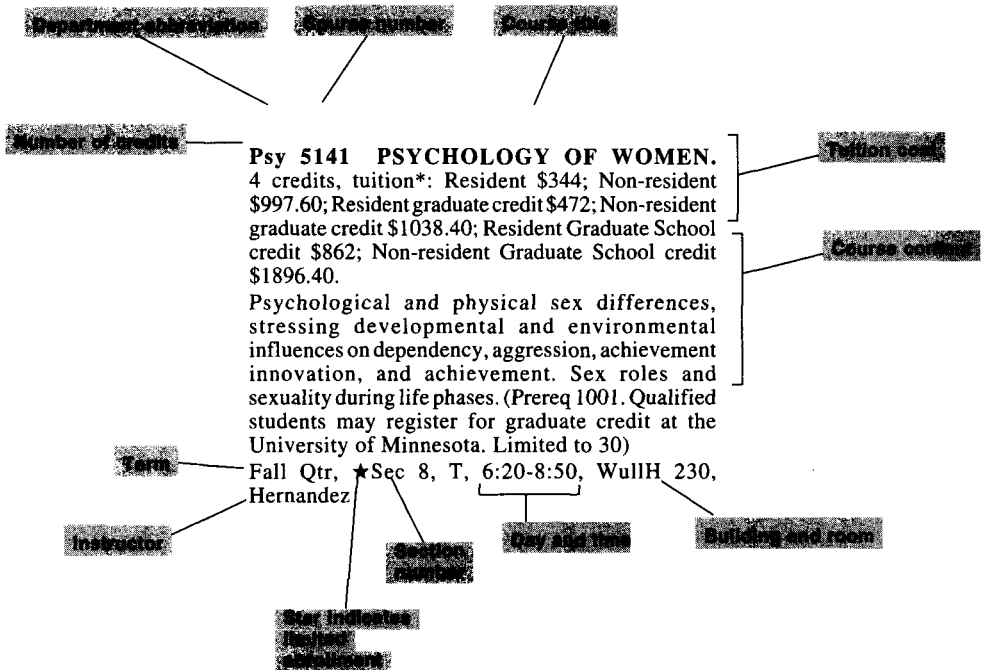
Students who register at the Minneapolis campus registration office at 101 Wesbrook Hall should check the closed-class board before bringing their registrations to the registration desk.

For information about grade base option, see page 36.

Additional information about enrollment, grading, credits, financial aid, academic progress, transferring classes (cancel/add), cancellations, refunds, campus services and facilities, and student activities is found in the Enrollment Information, Rules and Regulations, and General Information sections of this bulletin. You are responsible for all the policies and procedures that govern your registration in Extension Classes.

Sample course description

The course description below indicates the information found in course descriptions throughout this bulletin.



See page 24 to determine your tuition rate.

See page 54 for symbols and abbreviations.

All times are p.m. unless indicated a.m.

See the faculty list at the beginning of the department listing for instructor title.



| <b>Registration Options</b>   |   |
|---|---|
| <p><b>Day Classes</b><br/> <b>Registration options for day school students admitted to a degree program</b></p> | <p>Self-registration</p> <p>In-person Registration<br/>                     Locations:<br/>                     202 Fraser, Minneapolis campus<br/>                     130 Coffey Hall, St. Paul campus</p> <p>Dual Registration (for admitted students only)<br/>                     202 Fraser Hall<br/>                     130 Coffey Hall<br/>                     101 Wesbrook</p> <p>See <i>Class Schedule</i> or <i>Summer Session Bulletin</i> for registration dates and times</p> <p><i>Note:</i> Certain students need to register in their program office (e.g., MBA, Medical School, Law School, Dentistry, Veterinary Medicine).</p>   |
| <p><b>Payment</b></p>   | <p>All tuition and fees are billed through Student Accounts Receivable.</p>   |
| <p><b>Extension Classes</b><br/> <b>Registration options</b></p>  | <p>Mail Registration</p> <p>Fax Registration</p> <p>In-person Registration<br/>                     Locations:<br/>                     Wesbrook Hall, Minneapolis campus<br/>                     MacPhail, downtown Minneapolis<br/>                     St. Paul Skyway, downtown St. Paul</p> <p>Dual Registration (for admitted students only)<br/>                     101 Wesbrook<br/>                     202 Fraser Hall<br/>                     130 Coffey Hall</p> <p>See <i>Extension Classes Bulletin</i> for dates and times of registration.</p> <p><i>Note:</i> Certain students need to register in their program office (e.g., MBT, Neighborhood Programs, ESL, PSEOA).</p> |
| <p><b>Payment</b></p>   | <p>Due at time of registration*</p> <p>Cash</p> <p>Check/money order</p> <p>Credit card (Visa, MasterCard, Discover)</p> <p><i>*Exception:</i> Students eligible for financial aid, students whose tuition and fees are being billed to an agency, and students using dual registration will have their tuition billed through Student Accounts Receivable.</p>   |

# Bookstores

## Bookstores

Textbooks and other course materials are available at the four University of Minnesota Bookstores listed below. Each store specializes in the textbooks and materials specific to its location, so be sure to check the college and department listings given below with each bookstore to know which store carries the books for your course. Hours vary by store and time of year; call to check store hours and watch for announcements in *Info*, the Extension Classes newsletter. Bookstore hours are extended the first two weeks of the quarter, and the East Bank bookstore in Williamson Hall is open Saturdays, 10 a.m. to 4 p.m., fall through spring quarters.

### University of Minnesota Bookstore— East Bank (625-6000)

The East Bank bookstore located in Williamson Hall, 231 Pillsbury Drive, handles books for courses in the College of Liberal Arts (except for those CLA departments listed below in the West Bank Bookstore), College of Education and Human Development, General College, and the Institute of Technology.

### University of Minnesota Bookstore— West Bank (625-3000)

The West Bank bookstore, located between Anderson Hall and Blegen Hall, sells books for courses in the Carlson School of Management, as well as for these College of Liberal Arts departments: history, political science, geography, sociology, Afro-American and African studies, international relations, theatre arts, studio arts, economics, music (and music education), public affairs, and urban studies.

### University of Minnesota Bookstore— St. Paul (624-9200)

The St. Paul bookstore, located in the St. Paul Student Center, sells books for courses taught on the St. Paul campus.

### University of Minnesota Bookstore— Health Sciences (625-8600)

The Health Sciences bookstore, located in 2-554 Malcolm Moos Health Sciences Tower on the East Bank, sells books for courses in anatomy, history of medicine, laboratory medicine, microbiology, nursing, pharmacognosy, pharmacy, physical medicine and rehabilitation, physiology, public health, family planning administration, child and adolescent psychiatry, mortuary science, and other courses in the health sciences.

**Books for off-campus classes are available at the University bookstores.** The notice directly under each department heading in the Course Offerings section lists the bookstore that sells books for classes in that department.

**Pick up books before class.** Textbooks may be purchased before the first night of class. Lists of course offerings and required books are in the bookstores. However, if you are registered in an English Composition class, please attend the first class session before purchasing required books and materials.

**Special arrangements for book pick-up.** Arrangements may be made to send books between the St. Paul campus and Minneapolis campus bookstores.

**Ordering textbooks by phone.** You may order textbooks by telephone and charge costs for books and delivery to your Visa, MasterCard, or Discover credit card account. Call the appropriate bookstore (phone numbers below) and be prepared to give the department, course number, section number, your delivery address, and credit card information. If textbooks are in stock, your order will be filled and shipped within two working days. Postage and handling is \$2.50 plus the actual UPS charge. Wait for confirmation of your registration before ordering books by phone (handling and delivery charges are not refundable).

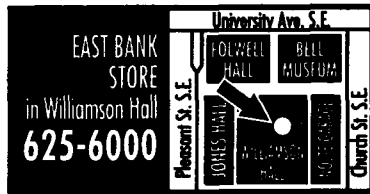
|                           |          |
|---------------------------|----------|
| East Bank Bookstore       | 625-6000 |
| West Bank Bookstore       | 625-5317 |
| St. Paul Bookstore        | 624-9200 |
| Health Sciences Bookstore | 625-8600 |

**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 the book is in

original condition. Deadlines: Fall Quarter, Oct. 4 (Wed.); Winter Quarter, Jan. 16; Spring Quarter, Apr. 8.

**Resale of books**—Since used textbooks offer a distinct savings to students, the University of Minnesota Bookstores attempt to buy as many as they can possibly use. Books are purchased throughout the school year, but you can typically get the best price for your books at the end of the quarter once textbook needs for the next term are known.

**Where You Can Find Us**



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# Enrollment Information

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## Enrollment into Extension Classes

Credit courses through Continuing Education and Extension/University College are offered in time formats, places, and delivery modes designed to accommodate students' needs. Course content and materials, work expected of students, and responsibilities of instructors are determined by the academic department granting the credit. Extension classes are expected to be the equivalent of campus-based day classes.

**The Department of Extension Classes has open enrollment.** There are no admission or entrance requirements; registrants need not possess a high school diploma. Students need only have a desire to learn. Registration in specific programs or classes sometimes may require prerequisite courses, formal admission, or experience. (See *Prerequisites*, page 35.) Students on financial aid usually must be admitted to a degree or certificate program; check with an adviser.

Students with excessive credits and problematic grade-point averages may have a hold placed on their record restricting their registration in Extension Classes.

**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 enrolled in both day school classes and Extension classes must register separately and pay separate tuition for each or use dual registration options.*

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.

**Extracurricular Events.** No extracurricular events requiring student participation may be scheduled from the beginning of study day to the end of finals week. Exceptions to this policy may be granted by the

Senate Committee on Educational Policy. The Senate advises all faculty that any exemption granted pursuant to this policy shall be honored and that students who are unable to complete course requirements during finals week shall be provided an alternative and timely opportunity to do so.

**Smoke-Free Campus Policy.** Smoking is prohibited in all facilities of the University of Minnesota, Twin Cities campus, except for designated private residence hall rooms.

## Student conduct code

All students registered in courses through Continuing Education and Extension/University College (CEE/UC) are governed by the University of Minnesota Student Conduct Code. Students who engage in behavior that disrupts the learning environment for others may be subject to disciplinary action under the code. In addition, CEE/UC may require students responsible for such behavior to discontinue course activities and may cancel their registration.

## How to be admitted to the University

Students interested in being admitted to a degree program at the University of Minnesota must follow certain procedures and meet specific requirements to do so. They should schedule an appointment with a CEE/UC adviser to determine their eligibility, receive information on steps to follow, and complete the necessary steps for admission. *Telephone 625-2500 to schedule a day or evening appointment or for phone consultation.*

## Joint Day/Extension classes

Extension students may enroll in certain day school classes through Extension registration offices. However, students enrolled at the University through the day school may not register for day classes through Extension.

For classes before 3:30 p.m., students should consult the day school quarterly *Class Schedule*. Registration is the same as for regular Extension classes (listed in this bulletin) except that registration does not begin until in-person registration dates. Students may be required to obtain written permission from the academic department offering the course and the instructor using the "Special Permission To Register Joint Day/Extension" form available from the registration office or by calling 624-2388. See the Class Schedule for additional information about obtaining instructor permission.

Departments that make day classes (offered before 3:30 p.m.) available to Extension students are indicated in the Course Offerings section of this bulletin (a note appears near the beginning of the department's course listings). The day school Class Schedule contains a list of specific classes. Access to these courses is usually limited to 2 or 3 students per course.

If you are planning to register through Extension Classes for a course offered before 3:30 p.m., call 624-2388 when mail registration begins each quarter to request a copy of the daytime Class Schedule, and procedures for registering in day school classes through Extension.

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.

**Joint day/Extension classes that begin at 3:30 p.m. or later are listed in this bulletin.** The symbol ● appears before the course section number.

**Note**—Enrollment in joint day/Extension classes does not constitute admission as required for some financial aid programs such as Pell Grant or Stafford Loan.

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## Counseling and academic advising

The CEE/UC Counseling Office offers academic and financial aid advising and career/educational counseling services to current or prospective students interested in CEE/UC offerings through Extension Classes, Independent Study, and Summer Session. The office is located at 314 Nolte Center; telephone 625-2500; e-mail [ceeadv@mail.cee.umn.edu](mailto:ceeadv@mail.cee.umn.edu). Nolte Center is located at 315 Pillsbury Drive S.E. (at 17th Ave. S.E.). Students may call to arrange for day or evening appointments or to consult with an adviser by phone. Advising is also available by e-mail.

See *Maps* in the back of this Bulletin. Students with mobility impairments should call ahead for assistance; a curb cut is provided on the south entrance to Nolte Center (Pillsbury Drive S.E.).

**Counseling**—Professional counseling services are available to assist persons with exploration, choice, planning, and implementation of educational and career goals. Counselors can help students learn more about their interests, values, abilities, and personal characteristics related to goals; identify career options and major fields of study; develop educational and career plans; and assess problems related to academic performance. Counseling services are offered for a fee and are available by appointment.

**Advising**—Academic advising is free and available by appointment to help students select programs of study (see *Degrees and Certificates*, page 505); determine prerequisites; interpret degree requirements; evaluate transcripts of previous college work; choose the kinds and number of courses to take and the order in which they should be taken; arrange for examinations for credit or advanced standing; and handle other academic matters.

**Financial aid**—Advising is available to students seeking information about grants, scholarships, loans, and work study for part-time or full-time study.

**Registration information sessions**—Information sessions, offered throughout the year by CEE/UC Counseling, provide new students with assistance in registration. These sessions focus on registration procedures, general requirements, and degree program admission. Limited information on transfer of credit and financial aid is available at the sessions. For more information or to sign up, call 624-0029.

# Tuition and fees

## How to Determine Which Tuition Rate To Pay

Consistent with current University policy on resident status, the Department of Extension Classes began charging nonresident rates during Fall 1992. Please read the following to determine the tuition rate you should pay.

Different tuition rates are listed with each degree credit course. If you are registering for a course that has a course number beginning with zero (0xxx), only one rate will be listed with the course. If you have been admitted to a degree program at the University of Minnesota and are classified as a nonresident, non-reciprocity student, you will need to pay either undergraduate or graduate non-resident tuition rates. Student status is subject to compliance review.

1.  **I have never been admitted to a degree program at the University of Minnesota.** (Pay Minnesota *Resident* tuition rates.)
2.  **I have been admitted to a degree program at the University of Minnesota and am classified as a resident or reciprocity student.** (Pay Minnesota *Resident* tuition rates.)
3.  **I have been admitted to a degree program at the University of Minnesota and am classified as a nonresident, non-reciprocity student.** (Pay *Non-resident* tuition rates.)

If you are classified as a nonresident/nonreciprocity student (definition 3 above), you must indicate that on your registration form in the Student Status section.

## Graduate Credit Tuition Rates

Many 5xxx-level courses are available for graduate credit. If you are registering for graduate credit, note that four graduate tuition options are listed with the course. The amount you pay will depend on (1) whether you are classified as a resident/reciprocity student or a non-resident/nonreciprocity student (see above) and (2) whether you intend to use the course in a University of Minnesota Graduate School program.

Pay the *graduate credit* amount listed (either resident or nonresident) if you **are not** applying the course to a University of Minnesota Graduate School program. Pay the *Graduate School* tuition amount listed (either resident or nonresident) if you **are** using the course in a University of Minnesota Graduate School program. See the section on graduate credit, page 40, or check with an adviser for more information.

Courses offered as 8xxx-level courses are open only to students admitted to the University of Minnesota Graduate School; pay either resident or nonresident tuition depending on your student status.



The full amount of the tuition and other fees must be paid at the time of registration (tuition rates in effect at the time of registration apply). Additional fees may be assessed for use of a laboratory, extra materials, or audio-visual equipment. Tuition charges and fees do not cover books.

Tuition options for each course are listed after the course title. Any course fees or special fees, required in addition to the tuition, are included in the total. The cost per credit varies depending on the level of the course, the tuition rate for the college, resident status, and whether you are applying the course to a University of Minnesota Graduate School program.

**At the time of printing, tuition and fees have not yet been approved by the Board of Regents and are subject to change.**

For special tuition rates for students age 62 and older, see page 46.

A regularly enrolled day school student who concurrently takes day courses and Extension courses must register on separate forms and pay both day and Extension fees. **Day school students are urged to consult first with their advisers before registering in Extension classes.**

Students who overpay will receive a refund by mail (if overpayment is \$100 or more, tuition checks are returned, however). Students who underpay will have their registration and tuition checks returned by mail or will be notified of additional tuition due if their registration was processed. For registered students who underpay, a hold will be placed on the student's record if payment is not received.

A \$20 handling fee is charged for all checks returned by a bank. Students should contact the Financial Systems Office at 138 Wesbrook (624-6354) 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.** However, VISA, Discover, and MasterCard are accepted for tuition and fees. Students may be eligible for financial aid; see *Financial Aid* below.

**Students are not registered until their tuition and fees are paid.**

### Fee statements

When you register, you will receive a confirmation of registration; this is your fee statement. Save this document; it is proof of enrollment and is required as identification for a number of University activities and services.

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

### Enrollment verification

Students who need enrollment verification (for bank or business purposes) should bring the paid fee statements to Student Relations, 150 Williamson Hall. Full-time undergraduate students carry 12 or more credits; three-fourths time, 9 credits; half-time, 6 credits; less than half-time, 5 credits or fewer.

Verification can be made only for enrollment and the enrollment dates of that term in Extension classes, **not** for attendance or grades. Duplicate fee statements are available in 101 Wesbrook Hall; transcripts are available at the Certification and Transcript Service, 150 Williamson Hall (625-5333).

### Registering with an authorization for payment

All students who plan to register under the authority or with the assistance of (1) an institution, company, or scholarship; (2) federal or state agency, including military service; or (3) foreign government or agency, may register by mail or in person at 101 Wesbrook Hall, telephone 624-5577, on the Minneapolis campus.

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## Financial aid

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**Authorizations for payment only apply to credit courses.** Students taking noncredit courses must include a check or money order for tuition (or credit card authorization).

If registering by mail, authorizations must include the following:

1. **Proper address:** Department of Extension Classes, University of Minnesota, 101 Westbrook Hall, 77 Pleasant Street S.E., Minneapolis, MN 55455
2. **Student's name**
3. **Correct amount of tuition and fees** for specific classes
4. **Term or dates of eligibility**
5. **Authorizing signature** or stamp required
6. **Complete address of agency** to be billed for tuition.

To register, follow the procedures outlined under Registration Instructions. Include your authorization (in place of your check) with your registration forms. Any late fees must be paid by the student.

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 101 Westbrook Hall (or FAX 625-1511).

Registration forms must be filled out completely.

## Financial aid

### *Academic progress*

Academic progress for students enrolled in degree-granting programs will be monitored by their respective college offices. CEE/UC will determine academic progress for students admitted to CEE/UC certificate programs and some nonadmitted CEE/UC students not held to other college standards. In addition, students receiving financial aid through the University of Minnesota Office of Scholarships and Financial Aid (OFSA)

will be held to a similar, but possibly different, standard. Financial aid recipients must meet both the college academic progress standard and the OFSA Satisfactory Academic Progress standard. For additional information, please refer to the Academic Progress section on page 35.

Students with excessive credits and problematic grade-point averages may have a hold placed on their academic record restricting their registration in Extension Classes.

### *Registration with financial aid*

**Common requirements for financial aid—**Because most financial aid programs require admission to a degree or certificate-granting program, you are encouraged to inquire about admission at the same time you apply for aid. Other requirements common to many financial aid programs include: U.S. citizen or eligible non-citizen (such as permanent resident or refugee); satisfactory academic progress (see above); completion of an academic program within the maximum time frame allowed by the Office of Student Financial Aid; demonstrated financial need; registration in on-campus credit classes; enrollment within the maximum or minimum number of credits required for eligibility; no default on educational loans or financial aid repayment owed; and no tuition or other selected holds on your University record. Also, some programs restrict aid to students working toward their first bachelor's degree.

**Registering with financial aid—**When you complete the registration form, indicate "financial aid" as the Method of Payment on that section of the form. Provided that you do not have tuition or other selected holds on your record, your registration will be processed and tuition and fees will be charged to your Student Accounts Receivable System (STARS) account. If you do not have a STARS account, one will be established for you. Most financial aid will be paid into your

STARS account for automatic payment of tuition and fees. If your aid does not pay through STARS, or if it falls short of covering all of your tuition and fees, you will be responsible for paying the balance by the due date.

Please refer to the Office of Scholarships and Financial Aid (OSFA) 1995-96 Information Guide for information on eligibility for OSFA-administered aid. In order to receive aid, you need to maintain satisfactory academic progress with **both** your college and OSFA. You also need to be admitted to a University of Minnesota degree or certificate program. The only exception is Minnesota State Grant, which is available to nonadmitted students who meet all other eligibility requirements. **Any applicant for OSFA-administered aid whose application for admission to a degree or certificate program is pending or denied will be placed on a holding status; aid will not be awarded or disbursed until admission has been finalized.** If you are unsure of your admission status, contact CEE/UC Counseling, 314 Nolte Center (625-2500). Simply registering for and attending classes does not constitute admission.

Students registering with financial aid should register during regular registration periods to avoid late fees. Late fees are the responsibility of the student.

Students who never attend class or stop going to classes must officially withdraw (cancel their registrations) at 101 Westbrook Hall and must pay that part of the tuition and fees that would not be refundable based on the refund policies described on page 50. Students receiving aid through the Office of Scholarships and Financial Aid are urged to contact OSFA for information about the impact that cancellation will have on their aid. Students who drop below the number of credits on which their aid is based may not be able to obtain the aid or may be required to pay back all or part of the award.

If your financial aid award exceeds the charges to your STARS account and you choose to pick up your check for the remaining balance at Student Accounts Receivable in 20 Fraser Hall, you will be asked to show a picture-ID, either a University of Minnesota ID or a driver's license.

### **Programs**

**Military personnel and veterans**—Please read the listing on pages 32-35.

**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 or reimbursement that may be available for Extension classes.

**Minnesota State Grant**—This program provides funds for part-time or full-time undergraduate study. Eligibility requirements are: U.S. citizen or permanent resident of the United States; Minnesota residency; enrollment in course work applicable to a degree or certificate program and maintenance of satisfactory academic progress; registration for three or more credits per term; and demonstration of financial need. Minnesota State Grant recipients must register for 15 credits per term to be considered full-time. In addition, applicants must not already have earned a bachelor's degree and must not have completed four years of education on a full-time basis beyond high school. Applicants use the FAFSA application, which is available at the Office of Scholarships and Financial Aid, 210 Fraser Hall, or the CEE/UC Counseling Office, 314 Nolte Center. Call CEE/UC Counseling (625-2500) for a set of procedures outlining the steps which must be followed.

**Federal Pell Grant**—The Federal Pell Grant is designed to provide financial assistance to part-time or full-time undergraduate students who do not have a prior bachelor's degree. Students must be registered for one

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## Financial aid

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or more credits a quarter. Pell applicants must be U.S. citizens, permanent residents, or eligible noncitizens. *Recipients must be admitted to a University of Minnesota degree- or certificate-granting program and must maintain satisfactory academic progress in order to receive funds.* Simply registering for and attending classes does not constitute admission. If in doubt, students should check with the CEE Counseling Office, 314 Nolte Center (625-2500). Applicants use the Free Application for Federal Student Aid (FAFSA), which is available at CEE/UC Counseling, 314 Nolte Center, or from the Office of Scholarships and Financial Aid, 210 Fraser Hall. Contact the CEE/UC Counseling Office for a set of procedures outlining the steps which must be followed. Procedures are revised yearly, or when the need arises.

**Campus-based aid**—Full-time undergraduate and half-time graduate students will be considered for campus-based aid. **Recipients must be admitted to a degree or certificate-granting program.** Most campus-based aid is restricted to students who do not already have a bachelor's degree. Programs include Federal Supplemental Educational Opportunity Grant, Office of Minority and Special Student Affairs (OMSSA) grants, Federal Perkins Loan, Federal Work-Study, and University scholarships, grants, and loans. Applicants use the FAFSA application which is available at CEE/UC Counseling, 314 Nolte Center (625-2500) or the Office of Scholarships and Financial Aid, 210 Fraser Hall (624-1665).

**Tuition Assistance Program**—Adult undergraduate part-time Continuing Education and Extension/University College students who have had to delay or interrupt their education for a total of three years or more may be eligible for the Tuition Assistance Grant Program. Students who have been enrolled for five years or more of exclusively part-time enrollment will also be considered. Applicants must demonstrate fi-

nancial need but be ineligible for other grants, scholarships, or tuition reimbursement, or have other aid which falls short of covering tuition and books. Admission is not required. Applications will be accepted until all funds are committed, or until the day before each quarter begins, whichever comes first. Tuition Assistance Program applications are available at CEE Counseling, 314 Nolte Center (625-2500).

**Student Parent HELP Extension Program**—This program provides grants for tuition and books for undergraduate low-income student parents enrolled part-time through Extension Classes. The program also provides funding for child care, referrals for housing and off-campus child care funding, and advising, counseling, and advocacy for personal and family issues. Applications are available at the Student Parent HELP Center, 25 Appleby Hall (625-5307).

**CEE Scholarships: Minority Access and Retention Scholarship, Nolte Scholarship, Schott Scholarship, Women's Christian Association Scholarship, Scholarship for Women, Mucke/Roff Scholarship, and Remington Scholarship**—These scholarships are intended for adult part-time Continuing Education and Extension/University College students who have financial need but are not served by other grants, scholarships, or tuition reimbursement, or have other aid which is insufficient to cover tuition, fees, and books. Applicants must have a gap of at least three years in their education, but the years counted in the gap do not need to be consecutive. Students who have five years or more or exclusively part-time enrollment will also be considered. Undergraduate students or students with a prior bachelor's degree who need additional undergraduate work will be considered. Awards are based on academic ability, financial need, and a statement of personal, educational, and career goals. Applications will be accepted for each quarter between these dates: June 12-Aug. 18, 1995, for fall

quarter 1995; Sept. 25-Nov. 17, 1995, for winter quarter 1996; Jan. 2-Feb. 16, 1996, for spring quarter 1996. For additional information about each of the scholarships, please contact CEE Counseling, 314 Nolte Center (625-2500).

**Special Term Classes**—Credits for special term classes that do not meet on the regular quarter schedule, such as 15-week Economics courses, may be treated differently in determining credit load and eligibility for financial aid. Check with an adviser if you are planning to register for a special term class.

**Financial aid for students with disabilities**—In addition to the financial aid programs listed in this section, students with disabilities may contact the offices listed below about additional financial aid options and services.

**Division of Rehabilitation Services**—Some financial aid help and vocational counseling may be available through the Minnesota Division of Rehabilitation Services. For information, contact the DRS Liaison at Disability Services, 252 Nicholson Hall, 626-8035 (voice), 624-5088 (TTY).

**Blind students** may call the Extension registration office (624-5577) concerning tuition exemption for Extension classes. Counseling regarding other financial assistance is available through the Minnesota State Services for the Blind and Visually Handicapped, 2200 University Ave. W., Suite 240, St. Paul, MN 55114-1840; telephone 642-0500 in the Twin Cities or toll free 1-800-652-9000. Tape and braille materials also are available from the Communication Center of State Services for the Blind, telephone 642-0500. Assistance on campus is available from Disability Services, 30 Nicholson Hall (626-1333).

**Special Funds**—Students with disabilities may contact Disability Services in 30 Nicholson Hall (626-1333) to discuss other

possible financial aid opportunities and types of assistance. (Special funds are limited.)

**Veterans with service-connected disabilities** may be eligible for vocational rehabilitation services through the U.S. Department of Veterans Affairs (VA). Write or call the Veterans Services Division, Room 181 Federal Building, Fort Snelling, St. Paul, MN 55111; 726-1454. Call toll free 1-800-827-1000 if outside the metro area; toll-free number for TDD is 1-800-829-4833.

**Ford Federal Direct Subsidized Loan and Ford Federal Direct Unsubsidized Loan**—Applicants must be admitted to a degree or certificate program, be enrolled at least half-time, and be making satisfactory academic progress. The unsubsidized loan does not require financial need and may be available to students who do not qualify for a need-based subsidized loan or who are eligible for less than the loan limit on a subsidized loan. The same terms and conditions apply for both loans except for the treatment of interest. Interest does not accumulate while the student is in school on the subsidized loan. On the unsubsidized loan, the borrower accrues interest while in school. Independent undergraduate students have the following annual loan maximums, minus any borrowing through the subsidized loan program: first-year students, \$6,625; sophomores, \$7,500; juniors and seniors, \$10,500. Total independent undergraduate borrowing through both programs cannot exceed \$46,000. Graduate and professional students may borrow a maximum of \$18,500 a year, with an aggregate limit of \$138,500, which includes undergraduate borrowing. Repayment begins 6 months after the borrower drops below half-time enrollment or graduates. The interest rate is variable, not to exceed 8.25 percent. Applicants use the FAFSA application, which is available at CEE/UC Counseling, 314 Nolte Center (625-2500) or the Office of Scholarships and Financial Aid, 210 Fraser Hall (624-1665).

**Other Educational Loans**—These loans include the Ford Federal Direct PLUS Loan, Student Education Loan Fund (SELF), and several private loan programs. All loans require half-time enrollment. PLUS and SELF loans require admission to a degree or certificate program. The private loans do not require admission. For additional information, contact the the Office of Scholarships and Financial Aid, 210 Fraser Hall (624-1665).

**Bank loans**—Most banks in the Twin Cities area offer a “line of credit” service to handle small, intermittent loan needs. Plans vary among banks, but the borrower usually must have an account with the bank, and a line of credit for a fixed dollar amount. Students may contact a bank for further information.

**Regents’ Scholarship Policy**—The Regents’ Scholarship Program provides tuition for University of Minnesota courses to eligible University of Minnesota civil service and union-represented staff. Staff eligibility requires employment of at least 75 percent time or 390 hours in a quarter or 585 hours in a semester-length special term class (15 weeks) in which the course is taken. Eligible staff are those on continuing, probationary, or temporary appointments or on approved leaves of absence from qualifying appointments. Staff on academic year appointments are eligible for summer session courses if they were employed the preceding spring quarter and will be employed the following fall quarter. Former eligible staff on the layoff list may take up to two classes per quarter (job or degree-related) with approval from the Career Transition Program (telephone 627-4353).

Regents’ Scholarship covers tuition only up to a maximum of 10 undergraduate or 6 graduate school or postbaccalureate professional degree credits, including thesis credits, for satisfactorily completed courses. Eligible courses must be for academic credit that appears on a University of Minnesota

transcript with A-F or S-N grading. Exceptions to this rule permit Regents’ Scholarship use for (1) noncredit mathematics courses, and (2) English As A Second Language 03XX designated course.

Regents’ Scholarship applications are available through your department (University Stores number GS 92353). For registration information, see the registration instructions section of this bulletin. Regents’ Scholarships will not be accepted until the second week of mail registration. **If you have registered and paid tuition, you may not use Regents’ Scholarships to obtain a refund. Regents’ Scholarships will not be accepted by the registration office after the last day of class.**

Policies regarding Regents’ Scholarships are subject to change.

(Regents’ Scholarships are **not accepted** for many Extension Classes/CEE/UC programs, including Compleat and Practical Scholar courses, Management Advancement Program Seminars, and Research Explorations. In addition, offerings by other departments may be excluded.)

University employees on at least a 75-percent appointment may take Compleat and Practical Scholar courses for half-price (plus all course fees or special fees). See the Compleat Scholar section in the **Noncredit Course Offerings** section of this bulletin. You must submit a letter from your department head verifying employment when you register. You may register starting the second week of mail registration.

**Graduate Assistant Tuition Benefit Program**—Graduate and professional students who hold appointments as graduate teaching assistants, research assistants, administrative fellows, and certain other professional school student positions may receive tuition benefits for credit classes in Extension. For eligibility information, contact the Graduate

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Assistants Office, 416 Johnston Hall; telephone 626-1310. (Classes must be 5000- or 8000-level and taken for graduate credit.) Courses must be applied to the degree program filed with the Graduate School.

**Academic Staff Tuition Benefit**—Faculty and professional administrative employees holding faculty appointments of 75 percent or more may register tuition-free in Extension credit classes in which space is available. Approval and employment verification from the faculty member's department head is required. Only tuition is waived; late fees, course and special fees, books, laboratory fees, and other costs must be paid by the faculty member. Audit registration is not permitted. Certification forms are available

in academic departments. Information on eligibility is available from Student Relations, 150 Williamson Hall (625-5333).

**Other Financial Aids**—A number of other financial aid options are available. Contact CEE/UC Counseling, 314 Nolte Center (625-2500), for additional information. Extension students who have questions or problems regarding financial aid are encouraged to call CEE Counseling.

**Tuition Reciprocity**—Residents of neighboring states may be eligible for resident tuition rates or for reduced nonresident rates. For additional information, contact Residence Classification and Reciprocity, 240 Williamson Hall (625-2006).

### Military information

#### *Personnel*

All military personnel are urged to familiarize themselves with the Registration Instructions and Enrollment 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 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 up to 90 percent a quarter credit hour for approved classes. (All classes in the *Extension Classes Bulletin* are quarter credit whether designated quarter or special term.) 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 should be requested. Registration must be made by mail or in person at 101 Wesbrook Hall, Minneapolis campus.

#### *Veterans*

To satisfy Veterans Administration requirements, veterans registering under the G.I. Bill must enroll in courses that are applicable to degrees, certificates, or other educational objectives approved by the VA.

**Veterans must see an adviser at the CEE/UC Counseling Office before registering if they have not previously reviewed educational plans and transcripts of all college work with an adviser.** Call 625-2500 to make arrangements to meet with an adviser. **Veterans must be admitted to a degree program by the start of their third term of enrollment; otherwise benefits are terminated.**

**VEAP (Chapter 32, the Post-Vietnam Era Veterans' Educational Assistance Program)** provides benefits to individuals who initially entered active duty after December 31, 1976. While serving on active duty, the serviceperson may voluntarily contribute to an educational assistance fund. Maximum entitlement is 35 months. The application form for Chapter 32 benefits is VA Form 22-1990. The application form must be completed and submitted to the Veterans Administration Certification Office in 150 Williamson Hall with a certified copy or original copy of DD-214 and the V.A. enrollment sheet when registering for Extension classes. Payments for veterans using VEAP Chapter 32 benefits is determined by the amount of the participant's contributions, DOD "kicker" if any, and number of months the veteran contributed. No payments are made for dependents.

**Selected Reserve Educational Assistance Program (Chapter 106 of Title 10, U.S.C.),** Public Law 98-525 enacted Oct. 19, 1984, revised the existing Chapter 106 program effective July 1, 1985, and transferred program administration responsibility to the VA. The reserve components in this program include the Army Reserve, Naval Reserve, Air Force Reserve, Marine Corps Reserve, Army National Guard, and Air National Guard, which are under the Department of Defense, and the Coast Guard Reserve, which is under the Department of Transportation, when it is not operating as a service in the Navy.



Eligibility is based on commitment to selected reserves for six years after June 30, 1985. Check with the reserve unit for details. Graduate degrees are not approved. A veteran may work toward a second bachelor's degree.

Entitlement is 36 months of full-time training or the equivalent part-time. Benefits are payable for full-time (\$190 monthly); three-fourths time (\$142.50 monthly); and one-half-time (\$95 monthly). For less than one-half time, the monthly benefit is \$47.50 a month. No allowance for dependents is made.

Reservists apply by completing form 22-1990 and DD Form 2384, Notice of Basic Eligibility (NOBE), obtained from the reservist's unit. These forms are then submitted with the V.A. enrollment sheet to 150 Williamson Hall.

**New G.I. Bill (Chapter 30)(Montgomery)**—Provides benefits to individuals who initially entered active duty after July 1, 1985, and meet qualifications. To check, call the Veterans Administration at 726-1454.

#### *Veterans Registration*

Before registering, please read pages 12-15 in regard to registration procedures.

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

**Certification for degree programs—Veterans must be certified every quarter.** Each time a veteran registers for Extension Classes and wishes certification to the Veterans Administration, a V.A. enrollment sheet must be completed. Call 625-8076 to request copies of the V.A. enrollment sheet. Please complete only one enrollment sheet for each registration period.

When registering by mail for Extension Classes, be sure to write separate checks to pay tuition and fees for each limited-enrollment class. Submit all documents together when registering, including registration

forms, tuition checks, and the V.A. forms (Application for Benefits form—1990 or 1995—if the first time using V.A. benefits and the V.A. enrollment sheet). The registration office in 101 Westbrook Hall will forward your V.A. forms to the V.A. Certification Office in 150 Williamson Hall for certification.

**Changes in registration**—If any changes in your enrollment (canceling or adding) take place after the start of the quarter, you must notify the Veterans Certification Office in 150 Williamson Hall (625-8076).

**Payments**—The amount of the monthly payment is determined by credit load. Credit minimums are as follows: for full-time benefit, 12 credits; for three-fourths time benefit, 9 credits; for one-half time benefit, 6 credits; for less than one-half time, reimbursement of tuition and fees only.

**Credits**—When registering for both quarter and special term classes, it is important to note that any change in credit load at the conclusion of a term may result in reduction of payments. If you are registering for special term classes, such as Economics classes that run 15 weeks, check with your adviser or the Veterans Certification Office on credit requirements.

**Advance Pay**—Veterans registering for at least half-time benefits and who have been out of school for at least one full calendar month are eligible for advance pay. This can be requested by filling out an Advance Payment Request Form, obtained by writing or calling the Veterans Certification Office in 150 Williamson Hall, 231 Pillsbury Drive S.E., Minneapolis, MN 55455; 625-8076. Requests cannot be made later than 30 days prior to the start of classes, nor earlier than 60 days before classes begin. Students who are registering for classes (by mail) during the advance pay period and wish to apply for advance pay must include a separate written request with their registration materials. This schedule shows the last date to apply for

## Military information

advance pay for each term when registering by mail:

|                 |                   |
|-----------------|-------------------|
| Fall Quarter:   | August 17, 1995   |
| Winter Quarter: | November 28, 1995 |
| Spring Quarter: | February 19, 1996 |

A 30-day deferment of tuition will be given only to veterans who apply for advance pay within the time listed above. No other deferment will be given. Veterans who receive a tuition deferment must pay the tuition not later than 30 days after classes begin. Failure to do so will result in the placement of a hold on the student's records and cancellation of certification to the VA effective the beginning of the term.

**Satisfactory Academic Progress**—Established standards of satisfactory progress can be found in the individual college bulletin for each degree program. Veterans who are not yet admitted to a degree program will be held to the CEE/UC academic progress standards as described in the degrees section of this bulletin. In the past, VA regulations have changed often and without advance notice. The information in this section was correct when this Bulletin went to press, but is subject to change without notice.

The VA has established these guidelines for reporting of nonpunitive grades:

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

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

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

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

|   |          |
|---|----------|
| Williamson Hall V.A.                    |          |
| Certification: .....                    | 625-8076 |
| Extension Classes V.A.                  |          |
| Information: .....                      | 624-3341 |
| Independent Study V.A.                  |          |
| Information: .....                      | 624-0000 |
| Advising and Counseling: .....          | 625-2500 |
| (necessary course work—degree planning) |          |
| Unsatisfactory Progress                 |          |
| Problems: .....                         | 625-8076 |

### *Other Services*

**Tutorial assistance**—Veterans enrolled under the G.I. Bill (does not include chapter 106) are eligible for tutorial assistance in those courses in which they are showing academic deficiency. 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 \$100 a month, with no entitlement charge for the first \$600.

**Veterans 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 or 1-800-827-0646.

**State of Minnesota**—Department of Veterans Affairs. Minnesota law provides that a veteran who has exhausted through use all of his or her federal educational benefits and

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who is enrolled in a university of higher learning in the State of Minnesota is eligible for a one-time grant of \$350. Applicants must demonstrate financial need and must be a resident.

Any dependent of a prisoner of war or person missing in action who was a resident of Minnesota at the time of entry into the armed forces may attend a state-supported vo-tech without charge or tuition. Such dependents may attend private institutions and may be reimbursed for tuition and fees at a rate not exceeding the tuition at Minnesota public institutions. Eligibility exists until the dependent has earned a bachelor's degree or certificate of completion.

Children of veterans who died of service-connected causes may be eligible for tuition benefits or stipends while attending institutions of higher learning. Contact the Department of Veterans Affairs.

Inquiries should be directed to the Department of Veterans Affairs, State of Minnesota, Veterans Service Building, St. Paul, MN 55155. Telephone 296-2562.

### 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. 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 an instructor decides that a student is not qualified once the class has begun, the student may be permitted to transfer to another course without penalty or cancel with a full

refund under the following conditions: The student must obtain from the instructor a written statement explaining that the student does not have the necessary background or prerequisites to complete the course. This statement should be obtained as early in the quarter as possible and must be obtained and submitted by the fourth class meeting. To transfer to another class, the student also must have written permission from the instructor of the class he or she is entering if the class has met one or more times. Since most instructors are reluctant to give permission for a student to enter a class that has met two or more times, transfers should only be considered very early in the term. To receive a full refund, the student must officially cancel by mail or in person using a cancellation form available from the registration office in 101 Wesbrook Hall. Cancellation should be done as early as possible in the term and must be completed by the fourth class meeting. Cancellations after the midpoint of any term may encounter grade recording delays. See *Cancel/Add*, *Cancellations*, and *Refunds* in the *Rules, Regulations and Policies* section. A prerequisite course usually may not be taken for credit after the advanced course has been satisfactorily completed.

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

### Academic Progress

Academic progress for students enrolled in degree-granting programs will be monitored by their respective college offices. CEE/UC will determine academic progress for students admitted to CEE/UC certificate programs and some nonadmitted CEE/UC students not held to other college standards. For information about CEE/UC standards, please see the Academic Progress statements in the Degrees and Certificates sections in the back of this bulletin.

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## Grades

In addition, students receiving financial aid through the University of Minnesota Office of Scholarships and Financial Aid (OFSA) will be held to a similar, but possibly different, standard. Financial aid recipients must meet **both** the college academic progress standard and the OFSA Satisfactory Academic Progress standard. Elements of the OFSA policy include cumulative grade-point average (GPA), academic year minimum requirements, and maximum time of financial aid eligibility. OSFA requirements vary, depending upon college of enrollment, type and length of program, and level of enrollment. When students apply for aid, the OFSA standard will be applied to past performance; students who did not receive financial aid will be evaluated on the same basis as students who received aid.

Undergraduate students with a grade-point average of less than 2.00 (a "C" average), a continuing inability to complete courses successfully, or lack of a plan to move toward timely completion of their degree or certificate programs may not meet the OFSA Satisfactory Academic Progress standard. Withdrawals, incompletes, failing grades, audited courses, and some repeated courses will not be counted as completed credits for the academic year minimum requirement. An undergraduate student enrolled for 12 or more credits each quarter during fall, winter, and spring quarters is expected to complete a minimum of 36 credits; a student enrolled for 6-11 credits each quarter for three quarters is expected to complete 18 credits; and a student enrolled for 1-5 credits each quarter for three quarters is expected to complete 9 credits.

Under the OFSA standard, undergraduate students admitted to a bachelor's degree program and enrolled for 12 credits or more each quarter are allowed a maximum of 18 quarters of financial aid eligibility; students enrolled for 6-11 credits each quarter are allowed a maximum of 36 quarters; and students enrolled for 1-5 credits a quarter are

allowed a maximum of 72 quarters of aid eligibility. Maximum quarters of eligibility for students admitted to certificate programs will be determined by the length of the program. Minnesota State Grant eligibility is more restrictive than other aid programs; eligibility is limited to 180 credits attempted. For Minnesota State Grant, credits attempted include credits earned at other post-secondary institutions which do not transfer to the University of Minnesota.

Students who have mitigating circumstances which prevent them from meeting OSFA academic progress standards may submit an appeal to OSFA at the address given below. Appeals must include a letter of explanation with appropriate documentation attached. Students who are unable to meet college academic progress standards because they have extenuating circumstances, or who have additional information to present that may change their standing, are encouraged to contact their college office to inquire about submitting an appeal.

OSFA academic year minimum requirements, GPA, and maximum time of aid eligibility for graduate, law, and professional students vary by program. For additional information about OSFA standards for all programs, please refer to the "1995-96 Information Guide for Financial Aid Recipients," which is mailed out with the OSFA Financial Aid Notification letter, or contact the Office of Scholarships and Financial Aid, 210 Fraser Hall, 106 Pleasant Street S.E., University of Minnesota, Minneapolis, MN 55455; (612) 624-1665. For additional information about CEE/UC academic progress or appeals, contact CEE/UC Counseling, 314 Nolte Center, 315 Pillsbury Drive S.E., University of Minnesota, Minneapolis, MN 55455; (612) 625-2500.

## Grades

**A-F Grading System**—Four permanent grades, A (highest), B, C, and D (lowest),

indicate completion of a course. The grade F represents performance that fails to meet basic course requirements and is unworthy of credit. The A-F grading system is almost always compulsory for courses in a student's major. Check with an adviser at 625-2500 for specific information.

**Note**—The Carlson School of Management and the General College also award plus/minus letter grades for their students. For Carlson School grading information, please call 624-3313.

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

Students wishing to take courses under the S-N grading system should be aware of the limitations placed on the system by the college in which they intend to earn a degree. Each college determines to what extent and under what conditions each system may be available to its students. Any college may specify what course or what proportion of courses taken by its students or by prospective students must be on which grading system. The A-F 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-F 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 without CEE/UC Scholastic Committee approval (there is no fee for changing). Instructors are not authorized to change students' grading systems. Changes can be made in person or by writing the Department of Extension Classes, 101

Wesbrook Hall, University of Minnesota, 77 Pleasant Street S.E., Minneapolis, MN 55455 (*telephone calls are not acceptable*). **If the student does not specify on the registration form the grading system desired, the A-F system will apply.**

**A symbol of I (incomplete)** is a temporary grade. **Stopping attendance without official cancellation will result in an F or N grade.** An I 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 the next quarter of registration becomes an F or N, depending on the grading system under which the course was taken. When an I is changed to a permanent grade, the I is removed from the student's record. Veterans are advised to read information under *Academic Progress*, page 35.

**The symbol K (continuing)** is assigned by an instructor to indicate that the course is still in progress and that a grade cannot be assigned at the present time. Upon completion of the course, a permanent grade is assigned.

**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 from the third week through the sixth week of any quarter, or the ninth week of any semester, 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 granted approval by the CEE/UC Scholastic Committee. If the student stops attending without

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## Transcripts

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official cancellation, the instructor will assign the grade of F or N, depending on the grading system under which the course was taken.

**It is advisable, therefore, that any student experiencing difficulty in a class after the sixth week of any quarter or midpoint of any special term, discuss the matter with a CEE/UC adviser immediately at 625-2500.**

**The symbol V** (visitor) indicates registration as an auditor or visitor (see Auditors, page 45).

**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; F, 0 grade points. A student's grade-point average is determined by dividing the sum of grade points by the sum of credits attempted, and passed. Credits taken on the S-N grading system are not usually included in the calculation of the official university grade-point average shown on transcripts; check with your college office. (Written instructions on how to compute your grade-point average are available from CEE/UC Counseling. Please call 625-2500 to request them by mail.)

A student who is considering repeating a course for which he or she has earned credit should check with an adviser at the CEE/UC Counseling department (625-2500) before registering. Each college within the University determines its own policy and procedures on repetition of courses for credit and recognition of grades.

### Transcripts and grade reports

Two types of services are available to obtain official transcripts: regular service and rush service. Official transcripts are certified and signed by the University Registrar; a fee is charged. Processing time for regular service is two to three working days; after process-

ing, your copies will be mailed to the places you have specified. Rush service guarantees your transcript will be issued to you in person or put in the mail on the same day the request is received. You must have a picture I.D. (student identification card, current passport, or driver's license) to receive over-the-counter rush service. The fees for official transcripts currently are \$4 for regular service and \$8 for rush service. Courier service may also be requested for both regular and rush service (cost additional). Visit the Office of the Registrar (150 Williamson Hall, Minneapolis, or 130 Coffey Hall, St. Paul) for more information and current rates or call 625-5333.

Official transcripts can be requested by mail. Requests can also be dropped off at the location below. No telephone requests are accepted. Requests should include your full name and signature, University I.D. number, social security number, date of birth, dates of enrollment and complete address(es) for mailing the transcripts. Send your requests to the Office of the Registrar, 150 Williamson Hall, 231 Pillsbury Drive S.E., Minneapolis, MN 55455 or to Coffey Hall, 1420 Eckles Ave., St. Paul, MN 55108. Your request must include a check or money order payable to the University of Minnesota for either the regular service fee or the rush service fee. Beginning fall 1995, credit card payment also will be accepted. To pay by credit card, you must include your major credit card account number and expiration date with your request.

The Office of the Registrar plans to implement FAX requests for rush service by fall 1995. When accepted, FAX requests should include all the above information plus your daytime phone number and a major credit card number and expiration date. Call 625-5333 for information on availability of FAX requests.

You may pick up an unofficial copy of your record by making a request (picture I.D. required) at 150 Williamson Hall or 130

Coffey Hall. There is no charge for an unofficial copy; however, there is a limit of one copy per day.

Extension grades and credits are automatically recorded for undergraduates on college (day school) transcripts. It is not necessary to request that your grades be transferred to your college record. Graduate and professional school students must petition for transfer of Extension credits to graduate or professional school records, however. Complete a "Request for Transfer" form at the Student Relations Unit, 150 Williamson Hall (625-5333).

Official quarterly reports of students' grades are released only by the University's Office of the Registrar and cannot be furnished by Extension offices.

**Grades by mail**—Grades for each term are mailed from the Office of the Registrar. You should allow four to six weeks from the close of a term for your grades to arrive in the mail. If you need grades sooner, you may leave self-addressed postcards with your instructors, who will mail grades immediately following the end of the term.

**Grades by computer**—You also may look up your grades on computer through the University's Student Access System, part of the Administrative Information Services (AIS) Public Access Information menu. Terminals are available in registration offices in 202 Fraser Hall and 130 Coffey Hall, on the concourse level in Williamson Hall, and on the LUMINA terminals in the libraries. From another computer, you may also use e-mail through Gopher and the internet; read about accessing your e-mail account on page 483. You will need your student ID number, social security number, and password. All information requests and choices are simple keyboarding or menu-driven. When you reach the public access screen, select menu item 13; you will go then to an initial entry screen where you enter identification information; after a password screen that comes up if you have not set a unique

password, you will get the primary option menu where you may select from several options dealing with registration, day school course availability, and grades and records. The system is available weekdays from 7:30 a.m. to 9 p.m. and Saturdays, 8 a.m. to 3 p.m. (except University holidays).

### Student identification card (I.D.)

A University identification number is assigned to your undergraduate transcript when you register for Extension classes. Always include the I.D. number when you register or complete other University forms.

Extension students are eligible for a University of Minnesota Card, called the U Card (you must know your U of M ID number). Everyone is encouraged to obtain one, and there is no charge for the card. The card contains a photograph in digital form, plus university data encoded on the magnetic stripes and printed on the front of the card.

The U Card will eliminate the need to show fee statements to obtain services. The libraries are already operational with the new card and other facilities will incorporate U Card functions this fall. The card also includes optional calling card and bank account features that represent excellent values to the student.

The U Card Office is located in Room 38-C Coffman Union, and cards may be obtained there from 8:30 a.m. to 4:30 p.m. Other locations on campus will also issue U Cards, and you will be informed of their locations when available.

## Credit registrations

### Credits

All credits listed in the class description are QUARTER credits even though some classes meet on a special term schedule. 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 the credits earned in a course may count toward the total number of credits required for either a degree or certificate program. A student who applies to a degree program should be aware that a record of all degree credits attempted in Extension Classes must be submitted at the time of application to the college offering the degree program.

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

**Residence**—Credits earned in undergraduate Extension Classes are University residence credits; however, until students have been formally admitted to the college from which they expect to obtain a degree, these credits are not necessarily considered to meet the college residence requirements of individual colleges of the University. See *Degrees and Certificates*, page 505.

2. **“Certificate credit”** means that the credits earned in a 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 *Certificates*, page 522.
3. **“Entrance credit”** means that credits earned 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).

**Use at Other Institutions**—Credits earned in Extension, like those earned in day classes, are applicable toward a degree at another institution under the policies determined by that institution.

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## Graduate School credit

Students who intend to pursue graduate-level course work through Continuing Education and Extension/University College should be familiar with the instructions in both this bulletin and the Graduate School bulletin. A Graduate School bulletin may be requested from the Graduate School, 309 Johnston Hall, 101 Pleasant Street S.E., University of Minnesota, Minneapolis, MN 55455 (625-3014).

**Course numbers beginning with the numeral “5” may be taken for graduate credit by qualified students only if the instructor holds a Graduate School faculty appointment and the course description includes a statement indicating that graduate credit is available.**

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

**Note that the inclusion of graduate-level courses on a University of Minnesota undergraduate transcript neither implies nor guarantees admission to the University of Minnesota Graduate School, nor does it guarantee that such course work will be approved for transfer to a Graduate School student’s degree program.**

**Planning a University of Minnesota Graduate School degree program**—Students intending to apply CEE/UC course work toward a University of Minnesota Graduate School degree must plan a coherent and relevant program of study. They are expected to review their plans with the Director of Graduate Studies or a qualified faculty adviser in the field of their choice. Special attention must be paid to the amount of course work that can be transferred to a degree program from outside the Graduate School, including from CEE/UC.

Course work for the Graduate School’s Master of Arts in English, the weekend



Master's of Social Work, the Master of Liberal Studies, and Master of Business Taxation programs may be completed entirely through CEE/UC registration. Students who wish to apply CEE/UC course work toward a Master of Science degree in Food Science should consult with their Director of Graduate Study concerning the number of credits which may be transferred from CEE/UC.

Students in all other Graduate School programs leading to the master's degree are required to register through the Graduate School for at least 60 percent of the course credits on their approved master's degree program.

The remaining 40 percent of the course credits required for the master's degree may be transferred from approved sources. The Graduate School will consider for transfer courses that meet the following criteria:

1. The courses must be completed as an adult special, summer special, or CEE/UC registrant at the University of Minnesota (such course work from other colleges and universities cannot be transferred), or as a formally admitted and registered student in an accredited graduate school at another university. A student may request that work be transferred from more than one such source, but no more than 40 percent of the total course work may be transferred from any combination of these sources.
2. The courses must have been taken for graduate credit and taught by faculty members authorized to teach graduate-level courses.
3. The courses must be used to satisfy Graduate School degree program requirements. Courses that are not required by the student's degree program cannot be transferred to the Graduate School transcript.

All requirements for a master's degree must be completed within seven years of the date of the oldest course work on the approved degree program, including any transfer work.

Students in a Graduate School program leading to a doctoral degree may transfer no more than 12 credits from CEE/UC to the doctoral program.

In all cases, requests to transfer course work are subject to early review and recommendation by the student's Graduate School adviser and Director of Graduate Studies and must receive final approval from the Graduate School. *Individual Graduate School programs may specify more restrictive requirements than those described above.*

**CEE graduate-level registration and fees**—Students must indicate on the registration form that they are registering for graduate credit. Courses for which graduate credit is available will include the graduate-level tuition cost and the University of Minnesota Graduate School tuition cost after the course title. Students then must pay either the graduate credit tuition rate (for courses that are to be applied to graduate programs not offered through the University of Minnesota Graduate School) or the University of Minnesota Graduate School tuition rate (for courses to be applied to a Graduate School program). Students classified as nonresident/nonreciprocity students must pay nonresident tuition rates.

By indicating registration for graduate credit on the registration form, you notify the instructor of the course, who then indicates on the final grade report whether the work was completed at the graduate level. If the work was completed at the graduate level and graduate tuition was paid, the course is entered onto the student's undergraduate transcript with an asterisk (\*) printed next to the course listing.

A student who later wishes such work to be transferred to the Graduate School transcript must submit a copy of the undergraduate transcript to the Graduate School when filing the degree program form. This transcript must show that the work was taken for

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## Earning credit

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graduate credit and must indicate a final grade for the work; course work that is "Incomplete" or for which no grade has been submitted cannot be transferred.

In order to change a CEE/UC registration from undergraduate to graduate credit (or the reverse), students must write or go to the Extension Classes Registration Office, 101 Wesbrook Hall, University of Minnesota, 77 Pleasant Street S.E., Minneapolis, MN 55455 (telephone calls are not acceptable). This may be done at any time during the period of instruction; however, no refund of tuition will be made after the third week of a term when changing from graduate to undergraduate registration. The Graduate School does not permit such change after the last day of instruction. Contact a CEE/UC Scholastic Committee representative at 625-2500 with questions.

A regularly enrolled day school student who concurrently takes day school courses and CEE courses must register separately in day school and in CEE/UC and must pay both day school and CEE fees.

**Transfer of courses taken previously**—Students who wish to transfer CEE/UC courses for which they earned graduate credit but did not pay the Graduate School tuition rate will be billed for the difference between the CEE/UC tuition paid and Graduate School tuition. The tuition differential to be charged will be the difference between the rates in effect at the time the course was taken. In addition, there is a \$20 records transaction fee. If the tuition and fee are not paid, a hold will be placed on the student's Graduate School record by CEE/UC. Check with the Extension Classes Registration Office, 101 Wesbrook Hall (625-3333), if you have questions.

**Transfer of CEE/UC graduate-level course work to other institutions**—The use of CEE/UC graduate-level course work to satisfy degree requirements at an institu-

tion other than the University of Minnesota will be entirely the prerogative of the student and the institution to which he or she submits the transcript, and is not the responsibility of either CEE/UC or the Graduate School of the University of Minnesota.

### Other options for earning credit

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 options are available. Students may obtain information on these programs by CEE/UC Counseling (625-2500). Following is a summary of the various options.

#### *Independent study "Y" registration*

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

Independent study can be arranged for any course so identified by an academic department, whether it is offered during day or evening hours. Department and instructor approval is necessary and a special form for that purpose, with the appropriate signatures, must be presented at time of registration. Registration is then completed in the usual manner but with a capital "Y" added after the course number. For the special permission form and for further assistance in making "Y" registration, consult CEE/UC Counseling, 314 Nolte Center (625-2500).

*Extra credit "X" registration*

Students may register in a degree credit course for one, two, or three 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 CEE/UC Counseling, 314 Nolte Center (625-2500).

*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 CEE/UC Counseling, 314 Nolte Center (625-2500).

*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. Students who have been admitted to a college within the University should contact their college to discuss special exam arrangements. Students who have not been admitted to a college may contact an adviser in the CEE/UC Counseling Department (625-2500) to discuss arrangements. All students must have established a University of Minnesota transcript in order to take a special examination. Not all courses are open to credit by examination, and departments may restrict its use in some cases. Students should check with their college office to make sure the college will accept credit by special examination. There is a \$30 fee (subject to change). Contact CEE/UC Counseling, 314 Nolte Center (625-2500).

*College-Level Examination Program (CLEP)*

The College-Level Examination Program has been established by the College Entrance Examination Board to enable individuals who have acquired their education in nontraditional ways to demonstrate their academic achievement. CLEP examinations in five areas—English, mathematics, natural sciences, social science/history, and humanities—are available for a fee to Extension Classes students who may be considering entering certain degree programs. Students will receive credit upon passing one or more tests, provided they have a satisfactory score and have not yet completed requirements in the appropriate area. Since the various colleges use different criteria in accepting CLEP results, for detailed information and referral, contact CEE/UC Counseling, 314 Nolte Center (625-2500).

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## Independent study

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### *University College directed study (UC 3075)*

University College provides an undergraduate directed study course listing (UC 3075) available to students who wish to pursue faculty-supervised projects that go beyond the scope of any single department or college of the University. Projects are interdisciplinary in nature and/or are done in departments that do not have an appropriate undergraduate directed study course. Students will be asked to consult with their faculty monitor and to complete the UC 3075 Independent Study Contract prior to registering. Students may take 3 to 15 credits of UC 3075. Further information may be obtained from the Inter-College Program Office of University College, 107 Armory (624-2004).

### **Research Explorations**

You can assist a University faculty member or other researcher as a volunteer member of a research team through the Research Explorations (REX) program. REX participants help in data collection, laboratory or field experiments, information processing, animal care, interviewing, or any number of activities associated with a research project. Time requirements vary depending on project, averaging four to six hours a week over a quarter. Through directed-study opportunities (see description above), it may be possible to receive credit for your REX participation. An application form is required. Preferred application deadlines are four weeks prior to the start of the quarter. For more information, call Research Explorations at 624-5092.

### **Independent Study**

The Department of Independent Study offers a wide variety of courses by the correspondence method. **Courses marked in this Bulletin with (IS) following course titles are available through Independent Study.** Independent Study course credits are recorded on a regular transcript and can be

used toward fulfilling distribution requirements in most University undergraduate programs. All Extension certificate programs accept such credits. Credits earned through the Department of Independent Study may be used to satisfy residence requirements, with approval from your college. Please check with your adviser if you are not sure about applying Independent Study credits toward your program.

More than 350 college courses and a number of high school courses are available through CEE Independent Study. Using textbooks, a printed study guide, and sometimes other materials, you work through lessons at your own pace. You submit assignments and exams for evaluation by a University instructor. For some courses, e-mail lesson service is available. You can register at any time, and you have up to a year to complete your course. With your self-motivation and written feedback from your instructor, you can earn University credits at home. Credit cards are accepted for payment (Visa, MasterCard, Discover).

A new program of Group Independent Study courses combines the advantages of home study with a limited number of class meetings for first-hand instructor contact. Graduate credit is available for several advanced-level Group Independent Study courses.

For people who like learning in a variety of ways, many Independent Study courses come with audiocassettes, videocassettes, or computer software, in addition to a written study guide. The *Independent Study Bulletin* gives details for each course about what materials are included and their costs. The tapes are also available at no charge for use in the Learning Resources Center of Walter Library, Minneapolis campus.

For information on courses, policies, and how to register, ask for an *Independent Study Bulletin*: 45 Wesbrook Hall, 77 Pleasant Street S.E., University of Minnesota, Minneapolis, MN 55455; telephone (612) 624-0000 or 800-

234-6564; FAX (612) 626-7900. E-mail addresses: [indstudy@maroon.tc.umn.edu](mailto:indstudy@maroon.tc.umn.edu). Or look up the bulletin on line at these locations: Web URL: <http://www.cee.umn.edu/dis> or URL: [gopher://mail.cee.umn.edu:70/11/dis](mailto:gopher://mail.cee.umn.edu:70/11/dis).

### **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. Non-attendance may result in an "N" grade recorded on the student's transcript. 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. In very rare instances, auditors will not be permitted in some classes.

Requests for change from credit registration to audit registration are made in person or by writing the Department of Extension Classes, 101 Westbrook Hall, University of Minnesota, 77 Pleasant Street S.E., Minneapolis, MN 55455 (625-3333). After the sixth week of a quarter class or the ninth week of a semester class, requests for change must be approved by the CEE/UC Scholastic Committee and the instructor; approval is granted only if the student is doing passing work at the time of the request. **No student whose tuition and fees are paid in whole or in part by military, Veterans Administration, company, Regents' Scholarships, or other 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.

### **Continuing Education Units (CEUs)**

The CEU is a nationally recognized unit of measurement awarded to participants in qualifying noncredit continuing education programs. It can become a part of your permanent University record. For a descriptive brochure about earning CEUs, contact the Department of Professional Development and Conferences Services, 131 Nolte Center, on the Minneapolis campus; telephone 625-6616.

### **Professional Development and Conference Services**

The Department of Professional Development and Conference Services (PDCS) presents noncredit programs that enhance the professional skills and continuing education of adult learners.

PDCS plans and conducts educational programs in collaboration with faculty, departments, colleges and professional schools, institutes, research centers, and other organizations. These programs utilize faculty expertise and the latest forms of educational technology to provide the most accurate and up-to-date information available. The department offers courses in a wide variety of fields, including science, technology, and engineering; health and human services; government, business, and nonprofit organizations; and arts, humanities, education, social and behavioral sciences.

Telephone 625-6616 or FAX 626-1632 for a listing of current and future PDCS programs.

### **Advanced High School Student Services Office**

Reduced-tuition, no-credit registration for youngsters 12 to 16 has been discontinued. Continuing Education and Extension/University College has an office to counsel,

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## Continuing Education for Women

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advise, and provide advanced placement information to young adults who have not yet graduated from high school and who want to take college classes. Interested students who are juniors or seniors in high school may contact the Advanced High School Student Services Office at 626-1666.

### **The Compleat Scholar/Practical Scholar**

**Noncredit Compleat Scholar and Practical Scholar** courses are flexible and noncompetitive courses designed for persons interested in learning for their personal satisfaction. There are no examinations, no transcripts, and no grades. See the *Noncredit Course Offerings* section of this bulletin for a list of course titles and complete descriptions.

### **Compleat Scholar Weekends**

For information about **Compleat Scholar Weekends**, see the noncredit section of this Bulletin, page 471.

## **Continuing Education for Women**

Continuing Education for Women offers credit and noncredit classes in times, formats, and locations designed to accommodate student needs. Most credit classes meet once or twice a week during the day at off-campus locations. See the credit course listing on page 395. Noncredit classes are offered as part of the Compleat Scholar and Practical Scholar curriculum.

The Continuing Education for Women Mucke/Roff Scholarship Fund was established for students registering for Continuing Education for Women credit and noncredit courses. Awards are made on the basis of scholastic ability, motivation, previous achievement, financial need, and realistic plans. Information is available from the CEE Counseling Office, 625-2500.

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### **Persons 62 and older (credit and no-credit options)**

Minnesota state law allows persons 62 and older to register in credit classes at reduced cost (credit registration) or no cost (no-credit registration) on a space-available basis. Only tuition is reduced or waived; course fees and special fees, if any, must be paid.

**Credit course registration**—Credit courses may be taken for University credit by persons 62 and older for only \$6 a degree, certificate, or entrance credit hour plus any fees. Or these courses may be taken free for no credit.

When registering by mail, students should be sure to include the completed registration forms and a check made payable to the University of Minnesota for special or course fees. If registering for credit, be sure to include \$6 a credit plus any fees. A separate check is required for each limited-enrollment class a student wishes to take. There are no late fees for persons 62 and older registering under the reduced tuition option in credit courses.

For classes with limited enrollment, registrations will be accepted starting the second week of mail registration. For information on the availability of space in limited-enrollment classes, call 625-3333 during registration dates specified on pages 6-11. For nonlimited-enrollment classes, students may register during regular registration periods by mail or in person. Be sure to see the sections on registration instructions and registration dates at the beginning of this bulletin.

For general information, call 625-3333.

**Noncredit Compleat Scholar and Practical Scholar Courses**—Persons 62 and older receive a 10-percent discount on tuition for many noncredit classes. When available, the discount is listed in the course price information in parentheses after the regular tuition. Participants must pay any course or special fees. This discount may not be combined with other discounts.

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# Rules, Regulations, and Policies

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## 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 information about new courses in *Info*, a newsletter for Extension Classes students.

### **Cancellation of, or change in, scheduled classes (made by Department of Extension Classes)**

Sometimes it is necessary 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. If Extension cancels a class, the student will be notified and will be given the opportunity to transfer into another class without a late fee or penalty. If the student does not want to enroll in another class, a full refund will be given.

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

Extension Classes are rarely canceled for any reason, including weather. However, in

the event that Extension Classes are canceled, local radio stations will be notified and asked to broadcast an announcement on the day in question.

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

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

## Attendance in classes

Students (including auditors) are responsible for attending classes in which they are registered. A student who cannot attend a

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## Cancel/Add

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class session should arrange with the instructor—in advance, if possible—to make up the work.

### Admission to a degree program

Students may take Extension classes without going through formal admissions procedures. However, if students plan to complete a degree program through the Department of Extension Classes, they should consult the CEE/UC Counseling Office, 314 Nolte Center (625-2500).

### 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 contact the CEE/UC Counseling Office, 625-2500, to have their previous course work evaluated. It is important to bring a transcript when meeting with an 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 equivalents are applicable to the degree or certificate program for which the student is applying.

### Cancel/Add (transferring) classes

Students who wish to cancel/add classes or class sections (cancelling one class and adding another class or section at the same time) after being officially registered may do so, if space is available, either in person at 101 Westbrook Hall or by mail. **Students may not cancel/add between terms.** You must officially cancel in person or by mail. **Simply stopping class attendance does not constitute cancellation; you will receive an F or N grade if you do not cancel officially.**

Students who wish to cancel/add after an initial registration will be subject to the following fees and conditions listed below:

|   |                    |
|---|--------------------|
| Prior to and during the first week of classes | None               |
| During the second week of classes             | \$10 (if accepted) |
| During or after the third week of classes     | \$20 (if accepted) |

For students who paid tuition by credit card, the tuition charge for the canceled class is credited to your account. Credit charges will not be transferred to the added course; a new transaction is required.

### Students who wish to cancel/add after the first week of classes must meet the following conditions:

*Cancel/Add During the Second Week (Quarter, Special Term)*—No cancel/add will be accepted after the end of the first week of the term without written permission of the instructor of the class the student wishes to enter.

*Cancel/Add During the Third Week or After (Quarter, Special Term)*—No cancel/add 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. **(Scholastic approval is required after the sixth week of the quarter. Contact the registration office or the CEE/UC Counseling Office at 625-2500 for information and petition forms.)**

There will be no late fee if: (1) University requests the cancel/add be made; (2) the cancel/add is required by an unacceptable grade in prerequisite course (see *Grades*, page 36); (3) the cancel/add is required because of University cancellation of course in which previously registered, provided such cancel/add is made within one week from date of cancellation of class; or (4) between sections of a course with the same course number.



Classes canceled after the second week will appear on your transcript with a grade of "W."

**Students must present fee statements at the time of transfer.**

**Veterans**—Any veteran registered under the G.I. Bill must notify the Veterans Certifications Office in Williamson Hall when canceling and adding classes; this is particularly important when it changes the credit load.

**Canceling: how to drop a course**

Students who wish to cancel a class or classes must do so officially, either in person, by FAX (625-1511), or by writing to the Department of Extension Classes, 101 Westbrook Hall, University of Minnesota, 77 Pleasant Street S.E., Minneapolis, MN 55455. By so doing, they will, if eligible, receive a refund (see *Refunds*, page 50), 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. For cancellations after the second week, the course will appear with a grade of "W."

Students who officially cancel from a class on or before the dates listed below will automatically receive a "W" (withdrawal) on the grade report. This symbol means "official cancellation without grade." Cancellations by mail are effective the date of the postmark (or date received if sent by campus mail or FAX). For cancellations by FAX, keep the confirmation slip from your FAX machine as additional proof of cancellation.

If you simply stop attending class and do not cancel officially, you will receive an F or N grade.

**Cancellations are not permitted without Scholastic Committee approval after the following dates:**

|                |            |
|----------------|------------|
| Fall quarter   | November 3 |
| Winter quarter | February 9 |
| Spring quarter | May 3      |

Scholastic Committee approval of cancellation after these deadlines is rare and given only in cases of extenuating circumstances, usually beyond the student's control. Therefore, students are strongly encouraged to consider financial, academic, work-related, and personal circumstances that affect their classes before the sixth week of the quarter. Contact an adviser (625-2500) early in the quarter or anytime an emergency arises to discuss your options.

College guidelines for cancellations will be strongly considered for students who are admitted to a degree program at the University of Minnesota.

Students can obtain a petition form from the registration office in 101 Westbrook Hall or CEE/UC Counseling in 314 Nolte Center. Instructor verification that the student is doing passing work is required. Completed cancellation forms, the petition form, and instructor's verification should be received by the Extension Classes registration office *before* the official start of final exam week for that term. Students will be notified by mail of the scholastic committee decision within approximately 10 working days.

**Note—no instructor is authorized to accept cancellation of any registration.** The student must submit a cancellation form or letter (in person or by mail or FAX) to the Extension classes registration office.

The effective date of cancellation will be the day on which the cancellation is received in the Extension Classes office, regardless of the date of the student's last attendance. (Cancellations by mail are effective the date of postmark or the date received if sent by campus mail or FAX.) It is important, therefore, that whenever students stop attending a class, they should officially cancel by filling out the appropriate forms at the Extension Classes office on campus at 101 Westbrook Hall or at the MacPhail Center in downtown Minneapolis.

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## Refunds

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**Do not stop payment of a check to cancel your registration.** You must cancel officially by mail or in person. A check handling fee of \$20 is charged for any stop order payment and you are responsible for any tuition due up to the point you officially cancel (based on the refund schedule below). A hold will be placed on your records until these fees are paid. Contact the Income Management Office in 138 Westbrook Hall (624-6354) before you stop payment of a check for any reason.

**Veterans**—Any veteran registered under the G.I. Bill must notify the Veterans Certifications Office in Williamson Hall when canceling classes.

**Financial Aid**—Students receiving financial aid through the University of Minnesota should check with a financial aid adviser before canceling classes. Changes in credit load affect eligibility. Refunds may revert to the financial aid office, or students may be obligated for repayment of all financial aid awarded.

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## Refunds

A new two-part refund policy is now in effect:

*I. Tuition Refund Schedule (credit courses only) for all students except those attending the University for the first time*

|   |      | <u>Cancellation Deadline</u> |           |           |
|---|------|------------------------------|-----------|-----------|
|   |      | <u>FQ</u>                    | <u>WQ</u> | <u>SQ</u> |
| Cancellation before or during first week of term  | 100% | Sept. 30                     | Jan. 8    | Mar. 30   |
| Cancellation through the middle of the third week | 50%  | Oct. 11                      | Jan. 17   | Apr. 10   |
| Cancellation through the fifth week               | 25%  | Oct. 28                      | Feb. 5    | Apr. 27   |
| Cancellation after the fifth week of term         | none |                              |           |           |

*II. Tuition Refund Schedule (credit courses only) for students attending the University for the first time (applies only during the first term of registration)*

|  |      | <u>Cancellation Deadline</u> |           |           |
|--|------|------------------------------|-----------|-----------|
|  |      | <u>FQ</u>                    | <u>WQ</u> | <u>SQ</u> |
| Cancellation before or during first week of term | 100% | Sept. 30                     | Jan. 8    | Mar. 30   |
| Cancellation during the second week of term      | 80%  | Oct. 7                       | Jan. 15   | Apr. 6    |
| Cancellation during the third week of term       | 70%  | Oct. 14                      | Jan. 22   | Apr. 13   |
| Cancellation during the fourth week of term      | 60%  | Oct. 21                      | Jan. 29   | Apr. 20   |
| Cancellation during the fifth week of term       | 50%  | Oct. 28                      | Feb. 5    | Apr. 27   |
| Cancellation during the sixth week of term       | 40%  | Nov. 4                       | Feb. 12   | May 4     |
| Cancellation after the sixth week of term        | none |                              |           |           |

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Students who wish to cancel a class or classes must do so officially, either in person, by FAX, or by writing to the Department of Extension Classes. Cancellations by mail are effective the date of postmark (or date received if sent by campus mail or FAX).

Refunds are based on the date of cancellation, not the number of times the student has attended class.

When students cancel they may be eligible for: (1) a full refund under the conditions

outlined in item 1 below; (2) a refund of tuition and any course or special fees (less any late fees) under the conditions outlined in item 2 below; or (3) a refund of part of the tuition and any course fees and special fees after the class has begun, provided that the student cancels and requests a refund within the time limits outlined in the refund schedule given above.

Students who wish to cancel a class and add another class should read the section on how to cancel/add, page 48.

If you are receiving financial aid, contact the Office of Scholarships and Financial Aid in 210 Fraser Hall (624-1665) before canceling and requesting a refund. If you drop below the number of credits on which your aid is based, you may be required to pay back all or part of your award.

1. Full refund of all tuition and course-related fees will be made when a class is canceled by Extension Classes after a student has registered in it.
2. A refund of full tuition and fees also will be made:
  - A. When a student cancels anytime before or during the first week of the term.
  - B. When a student is ill or hospitalized and, in the opinion of a doctor, is unable to continue for medical reasons. The doctor's signed statement on the doctor's letterhead is required and must be submitted no later than the end of the term.
  - C. To any student who has been recalled to or enlisted in military service upon presentation of military orders, provided the student would not be entitled to an appropriate grade at the time.
  - D. 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 course. Students seeking refunds under these conditions must:

- a. Ask the instructor for a note explaining that the student does not have the necessary prerequisites. Bring in the note, a fee statement, and a completed cancellation form to 101 Wesbrook Hall or submit the note and a cancellation letter by mail. It is the student's responsibility to obtain the note and to submit all documents at one time before the fourth class meeting.
- b. Present a transcript noting equivalent course(s), along with a fee statement and completed cancellation form, in person at 101 Wesbrook Hall or by mail. Documents must be submitted at the same time before the fourth class meeting.

Refunds for special (short) term classes will vary depending on the number of course meetings.

*Late fees are not refundable in any case.*

Refunds for tuition payments made by cash or check are paid by check only and are mailed to the student. A minimum of three to four weeks is required for processing a refund by check. For tuition payment by credit card, refunds will be credited to your credit card bank within five working days. For financial aid tuition payments billed through STARS, refunds are made to STARS. If your tuition payment included multiple sources of payment, refunds are credited, in order, to third-party payors, credit card accounts, and then the student.

For information about other refunds for other fees, see: *Recreation Facilities*, page 482; *Health Services*, page 484; *Regents' Scholarships*, page 30.

### **Access to student educational records**

In accordance with regents' policy on access to student records, information about you

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## Grievance

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generally may not be released to a third party without your permission. (Exceptions under the law include state and federal educational and financial aid institutions.) The regents' policy also permits you to review your educational records and to challenge the contents of those records.

Some student information—name, address, electronic (e-mail) address, telephone number, dates of enrollment and enrollment status (full-time, part-time, not enrolled, withdrawn and date of withdrawal), major, adviser, college and class, academic awards and honors received, and in the event of your graduation the degree received—are matters of public record or directory information. University officials and departments may provide this information in answer to inquiries without requiring authorization from you. You may prevent release of public information outside the University only during your terms of enrollment. To do so, you must notify the records office at 625-5333.

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

You are notified annually of your right to review your educational records. The regents' policy, including a directory of student records, is available for review in 150 Williamson Hall, Minneapolis, and at records offices on other campuses of the University. Questions may be directed to the Office of the Registrar, 150 Williamson Hall, (612) 625-5333.

### **CEE/UC Scholastic Committee**

The Continuing Education and Extension/University College Scholastic Committee is charged with interpreting and enforcing college and University regulations relating to academic affairs. It handles requests for exceptions to registration policies and procedures, admission standards for certificate programs, and transfer of credit policies for certificate programs.

The committee seeks to maintain the spirit of the University's regulations and is empowered to make exceptions in extenuating circumstances. Students experiencing difficulty which may interfere with their course work are encouraged to contact a Scholastic Committee representative in the CEE/UC Counseling Office, 625-2500, to discuss options.

### **Grievance procedures**

Established grievance procedures in the Department of Extension Classes follow the University's Student Academic Grievance Policy. Academic grievances must be based on a University rule, policy, or established practice claimed to be violated. If students believe they have a justifiable complaint about education or academic services (including grades or classroom procedures), they should first confer about the problem with the instructor. Many problems can be worked out in this way, seeking resolution through informal means.

If a solution satisfactory to them is not reached, they should consider informal resolution working with the appropriate administrator, such as a program director or the academic department director. If no informal resolution can be found at the lowest unit level, parties may seek informal resolution at the collegiate level (the CEE/UC Dean's office). Grievances regarding an instructor's judgment in assigning a grade based on academic performance may be resolved only through these informal resolution procedures.

Students who cannot resolve issues are urged to put the complaint in writing to the Director of Extension Classes, University of Minnesota, 180 Westbrook Hall, 77 Pleasant Street S.E., Minneapolis, MN 55455, who will confer with the appropriate academic department chairperson. If these informal procedures do not bring about a satisfactory solution, the complainant may move the case to the formal level. The complaint should

be submitted to the CEE/UC Academic Grievance Officer and include identification of the respondent, the incident, the claimed violation, and redress sought. All complaints must be filed within 90 days after the incident occurred. Further appeals proceed to the college-level and University-level grievance committees. Contact the CEE/UC Dean's Office, 150 Wesbrook Hall, 624-2517.

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.

### **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 general education; (2) to meet the mini-

imum requirements to qualify for or to establish a trade or business; or (3) to prepare you to return to work or re-enter any previous business or profession.

Deductible expenses include tuition, books, supplies, laboratory fees, and similar items.

Also, students may deduct the cost of driving or taking the bus from work to school. In some cases, other education-related travel and transportation expenses may be deductible as well.

Employees with qualifying unreimbursed educational expenses may deduct them only if they itemize deductions. A tax benefit is only available to the extent these expenses together with other miscellaneous itemized deductions, such as union dues, tax preparation fees, and the cost of professional books and journals, exceed 2 percent of the taxpayer's Adjusted Gross Income for the year. Self-employed individuals may deduct in full their qualifying unreimbursed educational expenses regardless of whether or not they itemized deductions.

For information call the local office of the Internal Revenue Service at 644-7515, or from outside the Twin Cities metropolitan area call toll free 1-800- 829-1040. A free IRS booklet, publication 508, Educational Expenses, may be of help.

# Course Offerings

Credit Courses begin **page 55**. See the list of credit Continuing Education for Women Courses, **page 395**. Also be sure to see *Noncredit Courses* beginning on **page 397**. See the sample course description on **page 16**.

Sections of courses with a star (★) have limits on enrollment. See *Registration Instructions*, **page 12**.

See *Symbols*, below. *Maps* begin **page 542**. *Abbreviations* and *Addresses for Off-Campus Classes* appear on **pages 540 and 541**.

Courses in this section are listed alphabetically by department. See **page 538** for a list of *Departments and Department Abbreviations*, and **page 540** for *Buildings* and their abbreviations.

*Course Numbering* is explained on **page 537**.

See *Index* for page numbers of individual departments.

## 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 sections, **page 12**.
- ⊙ A joint Day/Extension class. See **page 21**.
- † All courses listed before this symbol must be completed before credit may be received.
- § No credit is given if credit has been received for equivalent course listed after this symbol.
- ‡ Concurrent (simultaneous) registration is allowed or required in courses listed after this symbol.
- # Consent of instructor.
- (IS) Course also available through Department of Extension Independent Study. See **page 44**.
- Δ Consent of department offering course is required.
- cr Credit
- Qtr Quarter
- Sem Semester
- Spec Special Term
- S-N Satisfactory/No credit grading system. See **page 37**.
- A-F Letter grading system. See **page 36**.
- Lect Lecture
- Rec Recitation
- Prereq Prerequisite. See **page 35**.
- Sec Section
- Grad Graduate

## Abbreviations

**NOTE**—Campus building abbreviations are listed on **page 540** (maps begin on **page 542**). Abbreviations and addresses for off-campus class sites (neighborhood centers) are on **page 541** (maps begin on **page 542**). Course numbering is explained on **page 537**.

## Credit Courses

### Accounting (Acct)

(645 Management/Economics: 624-6506)

#### Carlson School of Management

Textbooks for most courses in Acct are available at University of Minnesota Bookstore—West Bank (625-3000).

(See also General College)

**A major in accounting can be completed in the evening.**

The Carlson School of Management offers the Bachelor of Science degree in Business, which includes the Accounting Program as a major. Students are referred to the Carlson School of Management Bulletin for information regarding the pre-admission requirements. Interested students should discuss plans with an advisor in The Carlson School (624-3313) or CEE Counseling (625-2500).

#### Core Requirements for Accounting Students

*Note:* If you were previously admitted to the Carlson School of Management and have not taken courses for two years or more, consult a CSOM advisor before continuing with your course work. Contact the Undergraduate Studies Office in 290 Humphrey Center for updated degree planning sheets. Telephone (612) 624-3313 for office hours and more information.

#### Core (28 credits)

Acct 3001—Introduction to Management Accounting

BFin 3000—Finance Fundamentals

IDSc 3030—Information Systems and Information Management

IR 3002—Personnel and Industrial Relations

Mgmt 3001—Fundamentals of Management

OMS 3000—Introduction to Operations Management

Mktg 3000—Principles of Marketing

#### Senior Policy Course (5 credits)

Mgmt 3004—Business Policy: Strategy Formulation and Implementation

#### Accounting Core (24 credits)

Acct 3101—Intermediate Financial Reporting

Acct 3201—Intermediate Management Accounting

Acct 5102—Advanced Financial Reporting I

Acct 5125—Auditing Principles and Procedures

Acct 5135—Income Tax Accounting

BLaw 3058—Introduction to Law and the Law of Contracts and Sales Contracts

#### 5xxx Accounting Electives (8 credits)—Two of the following:

Acct 5126—Internal Auditing

Acct 5160—Financial Statement Analysis

Acct 5180—Advanced Financial Reporting II

Acct 5201—Advanced Management Accounting

Acct 5236—Taxation II

Acct 5271—Accounting Systems

Acct 5300—Current Topics in Managerial Accounting

Acct 5310—Current Topics in Financial Accounting

#### Economics (4 credit course)—One of the following:

Econ 3101—Microeconomic Theory

Econ 3102—Macroeconomic Theory

Econ 3105—Managerial Economics

Econ 3701—Money and Banking

#### International (4 credits)—One of the following:

AgEc 3070, 5720, 5750, 5790

BGS 3004, 3014

Econ 3041/5041, 3315, 5301, 5307, 5313, 5315, 5331, 5337, 5401, 5431

FSMg 3460, 3490, 3620, 3680, 3820 (CSOM study abroad course work)

Geog 3321, 3331, 3378, 5145

IntR 5145, 5831

Pol 3477, 3810, 5889

PA 5820

#### Communications (12 credits)

Comp 3022—Critical Reading and Writing for Management

Comp 3032—Pre-Professional Writing for Business

Speech (one of the following):

Rhet 3254—Advanced Public Speaking

Rhet 3266—Discussion Methods

Spch 1101—Fundamentals of Speech Communications

Spch 3111—Leadership Communication

Spch 3411—Small Group Communication Processes

Spch 3605—Public Speaking

Spch 5422—Interviewing and Communication

Th 3803—Platform Performance

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

### Electives

You will need additional transferable electives (upper or lower division) to complete the 180 credits needed for graduation. Consult an adviser in the Undergraduate Studies Office (624-3313) before taking courses other than those listed above.

**Your attention is called to the Undergraduate Development Certificates in Accounting, page 526.**

The Accounting Department strictly adheres to class size limits. CEE will only register students for accounting classes through the first week of classes if space is available. The instructor will not be allowed to admit students to classes under any circumstances.

Students who are nearing the completion of their program and are admitted to the Accounting degree or certificate programs are encouraged to request early registration for upper division accounting courses, to assure space in the classes. See page 13 for early registration procedures.

Students will not be given permission to withdraw from an accounting class after the sixth week without extenuating circumstances and permission by the CEE Scholastic Committee.

*If for any reason you are having difficulty with registration in evening courses offered by the Accounting department, please call Nick Biondich at (612) 624-7055.*

### First year accounting courses

The first-year accounting course, Acct 1050, is designed to meet the needs of three groups of students: (1) those who plan to use accounting for management purposes; (2) those who intend to be practicing public accountants or work as a professional accountant in industry or government, and will continue with the second-year and advanced accounting courses; and (3) those who wish an introduction to the "language of business" as part of a liberal education. **This is not a bookkeeping course.**

**Acct 1050 INTRODUCTION TO FINANCIAL REPORTING.** 5 credits, tuition\* (includes \$16 special fee); Resident \$413.50; Non-resident \$1168.75. (IS)

Basic concepts of measurement and valuation that underlie development of financial reports for external users. Financial statement preparation. Analysis of alternative valuation approaches. Interpretation of financial statement information. Lectures for each quarter meet concurrently. **NOTE: Do not fill**

*in a section or room number on the registration form. Sections are filled sequentially. Students will be notified of section number and meeting room on their registration receipt. Must be taken A-F.* (Prereq 40 credits. Limited to 45)

Fall Qtr, ★Sec1, Lect, MW, 6-7:15, BlegH 5;  
Rec, MW, 7:25-8:15, BlegH 5

Fall Qtr, ★Sec2, Lect, MW, 6-7:15, BlegH 5;  
Rec, MW, 7:25-8:15, BlegH 105

Fall Qtr, ★Sec3, Lect, MW, 6-7:15, BlegH 5;  
Rec, MW, 7:25-8:15, BlegH 235

Winter Qtr, ★Sec4, Lect, MW, 6-7:15, BlegH 5;  
Rec, MW, 7:25-8:15, BlegH 5

Winter Qtr, ★Sec5, Lect, MW, 6-7:15, BlegH 5;  
Rec, MW, 7:25-8:15, BlegH 135

Spring Qtr, ★Sec6, Lect, MW, 6-7:15, BlegH 5;  
Rec, MW, 7:25-8:15, BlegH 5

Spring Qtr, ★Sec7, Lect, MW, 6-7:15, BlegH 5;  
Rec, MW, 7:25-8:15, BlegH 115

### Upper division accounting courses

**NOTE**—Students taking Carlson School of Management upper division undergraduate courses through CEE are expected to have completed the equivalent of 90 quarter college credits with a minimum of a "B—" grade average.

**Acct 3001 INTRODUCTION TO MANAGEMENT ACCOUNTING.** 4 credits, tuition\* (includes \$16 special fee); Resident \$390; Non-resident \$1100.60. (IS)

Management accounting as the main information collection and analysis technology in an organization. Analysis of cost-volume-profit relationships, budgeting, and analysis of variances from budgeted performance, issues relating to decentralized organizational design, activity-based costing. Lectures for each quarter meet concurrently. **NOTE: Do not fill in a section or room number on the registration form. Sections are filled sequentially. Students will be notified of section and meeting room on their registration receipt. Must be taken A-F.** (Prereq 1050 and at least 90 credits completed or in progress. Limited to 45)

Fall Qtr, ★Sec1, Lect, MW, 6-7, AndH 230; Rec, MW, 7:10-7:55, AndH 230

Fall Qtr, ★Sec2, Lect, MW, 6-7, AndH 230; Rec, MW, 7:10-7:55, BlegH 115

Winter Qtr, ★Sec3, Lect, MW, 6-7, AndH 330;  
Rec, MW, 7:10-7:55, AndH 330

Winter Qtr, ★Sec4, Lect, MW, 6-7, AndH 330;  
Rec, MW, 7:10-7:55, BlegH 205

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



**Acct 3101 INTERMEDIATE FINANCIAL REPORTING.** 4 credits, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60. Relationships between economic events and their representation in financial statements aimed at external users. Income determination, revenue recognition, asset valuation, capitalization of corporations, cash flow statements. **Must be taken A-F.** (Prereq A or B in 1050 and at least 90 credits completed or in progress. Limited to 45)

Fall Qtr, ★Sec1, TTh, 6-7:45, BlegH 145

Spring Qtr, ★Sec2, MW, 6-7:45, BlegH 220

**Acct 3201 INTERMEDIATE MANAGEMENT ACCOUNTING.** 4 credits, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60. Management control and incentive properties of accounting measurements in large decentralized organizations. Imprecise performance measures and self-selection. Design of internal control systems in decentralized organizations, focusing on strategic interactions among the internal control system, market share, and pricing strategies. Performance evaluation, transfer pricing, cost allocations. **Must be taken A-F.** (Prereq 3001. At least 90 credits completed or in progress. **Prereq will be enforced.** Limited to 60)

Spring Qtr, ★Sec1, MW, 6-7:45, BlegH 150

**Acct 5102 ADVANCED FINANCIAL REPORTING I.** 4 credits, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60; Resident Graduate credit \$488; Non-resident Graduate credit \$1054.40; Resident Graduate School credit \$878; Non-resident Graduate School credit \$1912.40.

Valuation problems in financial reporting with emphasis on liabilities. Includes leases, deferred taxes, pensions, other post-retirement benefits, debt restructuring, and earnings per share. **Must be taken A-F.** (Prereq 3101 or 5101. At least 90 credits completed or in progress. Qualified students may register for graduate credit at the University of Minnesota. Limited to 48)

Winter Qtr, ★Sec1, MW, 5:30-7:15, BlegH 240

**Acct 5125 AUDITING PRINCIPLES AND PROCEDURES.** 4 credits, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60; Resident Graduate credit \$488; Non-resident Graduate credit \$1054.40; Resident Graduate School credit \$878; Non-resident Graduate School credit \$1912.40.

Emphasis on the independent verification and evaluation of financial information systems including external and internal audit, audit of computerized information systems, assessments of control risk.

**Must be taken A-F.** The prerequisite will be enforced. (Prereq 3101 or 5101. At least 90 credits completed or in progress. Qualified students may register for graduate credit at the University of Minnesota. Limited to 53)

Fall Qtr, ★Sec1, T, 5:30-9, BlegH 125

Fall Qtr, ★Sec2, T, 5:30-9, BlegH 5

**Acct 5126 INTERNAL AUDITING.** 4 credits, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60; Resident Graduate credit \$488; Non-resident Graduate credit \$1054.40; Resident Graduate School credit \$878; Non-resident Graduate School credit \$1912.40.

Financial and operational auditing. Standards. Managing the function. **Must be taken A-F.** (Prereq 5102, 3201 or 5201. Qualified students may register for graduate credit at the University of Minnesota. Limited to 45)

Fall Qtr, ★Sec1, MW, 6-7:45, BlegH 140

**Acct 5135 INCOME TAX ACCOUNTING.** 4 credits, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60; Resident Graduate credit \$488; Non-resident Graduate credit \$1054.40; Resident Graduate School credit \$878; Non-resident Graduate School credit \$1912.40. (IS)

Principles of federal income taxation, with an emphasis on the taxation of individuals. Students will learn how the tax system works, will be introduced to tax research and how to read and analyze statutes, cases, and other legal authority. **Must be taken A-F.** (Prereq 1050. At least 90 credits completed or in progress. Qualified students may register for graduate credit at the University of Minnesota. Limited to 50)

Fall Qtr, ★Sec1, MW, 6-7:45, BlegH 10

Winter Qtr, ★Sec2, MW, 6-7:45, BlegH 145

Spring Qtr, ★Sec3, W, 5:30-9, BlegH 225

**Acct 5160 FINANCIAL STATEMENT ANALYSIS.** 4 credits, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60; Resident Graduate credit \$488; Non-resident Graduate credit \$1054.40; Resident Graduate School credit \$878; Non-resident Graduate School credit \$1912.40.

Interpreting and analyzing financial statements and schedules for investors and other users. **Must be taken A-F.** (Prereq 1050 or MBA 8030. Students are encouraged to take 3101 or 5101 prior to enrolling in this course. Qualified students may register for graduate credit at the University of Minnesota. Limited to 30)

Winter Qtr, ★Sec1, T, 5:30-9, BlegH 210

Winter Qtr, ★Sec2, W, 5:30-9, BlegH 210

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Acct 5180 ADVANCED FINANCIAL REPORTING II.** 4 credits, tuition\* (includes \$16 special fee); Resident \$390; Non-resident \$1100.60; Resident Graduate credit \$488; Non-resident Graduate credit \$1054.40; Resident Graduate School credit \$878; Non-resident Graduate School credit \$1912.40.

Partnerships, business combinations, consolidated financial statements, foreign currency transactions and translations, and reporting issues in governmental accounting. **Must be taken A-F.** (Prereq 5102. Qualified students may register for graduate credit at the University of Minnesota. Limited to 52)

Spring Qtr, ★Sec1, TTh, 6-7:45, BlegH 145

**Acct 5230 CORPORATE TAXATION.** 4 credits, \$862 plus special fee required.

Tax consequences of forming, operating, and liquidating a business corporation. (Prereq Δ and Acct 5135. Offered fall quarter. **For registration and special fee information, call 624-7511.** This course cannot be used to meet undergraduate degree requirements. Qualified students will be registered for graduate credit at the University of Minnesota. Enrollment is limited)

**Acct 5236 TAXATION II.** 4 credits, \$862 plus special fee required. *This course also may be taken for undergraduate credit at an undergraduate tuition rate.*

Corporate tax issues, partnership tax issues, estate and gift taxes, tax research. (Prereq Δ and Acct 5135 and at least 90 credits completed or in progress. Offered spring quarter. **For registration and special fee information, or the undergraduate tuition rate, call 624-7511.** This course may be used to meet undergraduate degree requirements. Qualified students may register for graduate credit at the University of Minnesota. Limited enrollment)

**Acct 5340 PARTNERSHIP TAXATION.** 4 credits, \$862 plus special fee required.

Tax consequences of forming, operating, and dissolving a partnership. (Prereq Δ and Acct 5135. Offered fall quarter. **For registration and special fee information, call 624-7511.** This course cannot be used to meet undergraduate degree requirements. Qualified students will be registered for graduate credit at the University of Minnesota. Enrollment is limited)

**Taxation studies**—5230 and 5340 are part of a series of courses designed for students interested in post-baccalaureate studies in taxation. For information concerning registration, special course fees, and additional course offerings during 1995-96, call 624-7511.

## Adult and Teacher Education

See Vocational Education

## Aerospace Engineering and Mechanics (AEM)

(107Akerman Hall: 625-8000)

### Institute of Technology

Textbooks for most AEM courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Aerospace Engineering and Mechanics. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

*The ground school course for private pilots (AEM 3009) is not offered 1995-96.*

**AEM 1015 STATICS.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Force and moment vectors; resultants. Principles of statics. Application to simple trusses, frames and machines. Distributed loads. Hydrostatics. Properties of Areas. Laws of friction. **Must be taken A-F.** (Prereq Phys 1251 or equivalent, Math 1261. Limited to 75)

Fall Qtr, ★Sec1, W, 6:10-9:30, AkerH 225

Winter Qtr, ★Sec2, T, 6:10-9:30, AkerH 225

**AEM 3016 DEFORMABLE BODY MECHANICS.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60.

Uniaxial loading and deformation. Stress and strain at a point. Forces and moments in beams. Centroids and second moments. Material behavior; linear elasticity. Torsion. Bending of beams of symmetrical section. **Must be taken A-F.** (Prereq 1015, ¶Math 3261 or equivalent. Limited to 75)

Fall Qtr, ★Sec1, T—6:10-9:30, AkerH 319

Spring Qtr, ★Sec2, W—6:10-9:30, AkerH 209

**AEM 3036 DYNAMICS.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60.

Review of particle dynamics. Mechanical systems and the rigid-body model. Kinematics and dynamics of plane systems. **Must be taken A-F.** (Prereq 1015, ¶Math 3261 or equivalent. Limited to 75)

Winter Qtr, ★Sec1, T—6:10-9:30, AkerH 309

Spring Qtr, ★Sec2, M—6:10-9:30, AkerH 209

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**AEM 3200 INTRODUCTION TO ENGINEERING FLUID MECHANICS.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60.

The flow of viscous incompressible fluids; fluid statics, Bernoulli flow, momentum conservation, laminar and turbulent pipe flow, laminar and turbulent boundary layers. (Prereq 1015, Math 3261, Phys 1251 or equivalent. Limited to 50)

Fall Qtr, ★Sec 1, T, 6:10-9:30, AkerH 313; Lab, Th, 6:10-9:30, AkerH 30

## Afro-American and African Studies (Afro)

(808 Social Science Tower: 624-9847)

### College of Liberal Arts

Textbooks for most Afro and Arab courses are available at University of Minnesota Bookstore—West Bank (625-3000).

(See also History and Women's Studies)

Teirab AshShareef, Assistant Professor

Rose Brewer, Associate Professor

Victoria Coifman, Assistant Professor

Caesar Farah, Professor

Gayle Foreman, Lecturer

Musa Moore-Foster, Lecturer

Aggrey J. Otieno, Teaching Specialist

Charles A. Pike, Assistant Professor

Belkacem Saadallah, Lecturer

John M. Taborn, Associate Professor

Loren E. Tesdell, Lecturer

Nassif Youssif, Assistant Professor

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Afro-American and African Studies and in Arabic. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**Afro 1021 INTRODUCTION TO AFRICA.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Diverse elements of African studies curriculum, content, and methodology. Historical perspective and present trends. (No prereq. Limited to 45).

Spring Qtr, ★Sec 1, W, 6:20-8:50, BlegH 135, Coifman

**Afro 1221-1222-1223 BEGINNING SWAHILI.** 5 credits, tuition\*: Resident \$397.50; Non-resident \$1152.75.

Basic listening, speaking, reading, and writing skills. Emphasis on spoken Swahili of Tanzania. (No prereq for 1221; 1221 for 1222; 1222 for 1223. Limited to 25).

Fall Qtr, 1221, ★Sec 1, Th, 4:15-6:20, SocSci 1383

Winter Qtr, 1222, ★Sec 1, Th, 4:15-6:20, BlegH 245

Spring Qtr, 1223, ★Sec 1, Th, 4:15-6:20, SocSci 101

**Afro 3025 BLACK AMERICANS: SOCIALIZATION, PERSONALITY, AND BEHAVIOR.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Development of the black psyche and of the black person and black culture. (No prereq. Limited to 35)

Fall Qtr, ★Sec 1, T, 6:20-8:50, BlegH 205, Taborn

(See also CSch 0261, Black Roots in Photography: Defining the African-American Experience)

**Afro 3072 RACISM: SOCIALPSYCHOLOGICAL CONSEQUENCES FOR BLACK AMERICANS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Racism and its effects on black Americans; definitions, determinants, and dynamics. Examined in an experiential context to reflect individual and institutional racism in milieus of student interest. (No prereq. Meets concurrently with Afro 5072. Limited to a combined total of 60)

Winter Qtr, ★Sec 1, T, 6:20-8:50, BlegH 250, Taborn

Spring Qtr, ★Sec 2, T, 6:20-8:50, BlegH 250, Taborn

**Afro 3514 AFRICAN-ARABIC LITERATURE IN TRANSLATION.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Continental African literature in Arabic from different countries: Algeria, Egypt, Libya, Mauritania, Morocco, Sudan, Tunisia, and Western Sahara. Various genres represented: the novel, the short story, poetry, and drama. Major writers: Abd-al-Hayy, Abd-al-Sabur, Barrada, Binnis, al-Fayturi, al-Hakim, Mahfouz, El-Saadawi, Salih, Shukri, and Wattar. African-Arabic oral literature will act as a backdrop. Emphasis on 20th century. Texts discussed in cultural and historical context. Theoretical and critical essays. No knowledge of Arabic required. All readings in English. (No prereq. Limited to 25)

Fall Qtr, ★Sec 1, M, 4:15-7, BlegH 245, AshShareef

**Afro 3601 INTRODUCTION TO AFRICAN LITERATURE.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60. (IS)

Oral and written African literature of the 19th and 20th centuries. All readings in English. (No prereq. Limited to 25)

Fall Qtr, ★Sec 1 T, 6:15-8:50, BlegH 245, Pike

Spring Qtr, ★Sec 2 T, 6:15-8:50, BlegH 245, Pike

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Afro 3654 AFRICAN CINEMA.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Films by African filmmakers. Aesthetic, theoretical, and sociopolitical issues will be explored through class screenings and critical readings. Emphasis on films from sub-Saharan Africa. (No prereq. Limited to 25)

Winter Qtr, ★Sec 1, T, 6:15-9:50, BlegH 255, Pike

**Afro 3910 TOPICS IN AFRO-AMERICAN AND AFRICAN STUDIES: BROTHERMAN: Explorations of African-American Masculinity.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

An interdisciplinary and gender-aware examination of the culture of black men, theories of masculinity and the nature of their interactions within the African-American community as well as larger society. Topics include the historical transformation of black manhood; the mosaic of family relations; health and maleness; the relevance of learning styles; athletics, entertainment, and exploitation; black men and white governance; sexuality and sexual identity; violence, justice, and peace in the world view of black men; and spirituality and the art of self-expression. (No prereq. Limited to 25)

Fall Qtr, ★Sec 1, M, 4:15-7, BlegH 105, Moore-Foster

**Afro 3910 INTRODUCTION TO AFRICAN POLITICS AND GOVERNMENT.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Politics and government in Sub-Saharan African states. Importance of the past for understanding the present political, social, and economic relationships of African politics. Key institutions and behavior in social and cultural settings; class, ethnic structure, parties, elections, source and nature of ideologies, economic and social policies. (No prereq. Limited to 30)

Fall Qtr, ★Sec 2, TTh, 4:15-7, BlegH 105, Otieno

**Afro 5072 RACISM: SOCIAL-PSYCHOLOGICAL CONSEQUENCES FOR BLACK AMERICANS.** 4 credits, \$3072, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

See course description for Afro 3072. (No prereq. Meets concurrently with Afro 3072. Qualified students may register for graduate credit at the University of Minnesota. Limited to a combined total of 60)

Winter Qtr, ★Sec 1, T, 6:20-8:50, BlegH 250, Taborn

Spring Qtr, ★Sec 2, T, 6:20-8:50, BlegH 250, Taborn

**Afro 5910 TOPICS IN AFRO-AMERICAN AND AFRICAN STUDIES: BROTHERMAN: Explorations of African-American Masculinity.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

See course description for Afro 3910 sec 1. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 30)

Fall Qtr, ★Sec 1, T, 6:20-8:50, BlegH 210, Moore-Foster

## Arabic (Arab)

**Arab 3036 THE RELIGION OF ISLAM.** 4 credits, \$MELC 3036, \$ReIS 1036, tuition\*: Resident \$344; Non-resident \$997.60.

Evolution of Islam in historical context; institutions that made for diversity and continuity; traditions, laws, and observances of the faith; sectarian movements; philosophical and theological trends; modern developments; reformist, revolutionary, and militant. (No prereq. Meets concurrently with MELC 3036 and ReIS 1036. Limited to a combined total of 40)

Spring Qtr, ★Sec 1, T, 6:20-8:50, BlegH 105, Farah

**Arab 3213 QUR'AN AS LITERATURE.** 4 credits, \$MELC 3212, ReIS 3213, tuition\*: Resident \$344; Non-resident \$997.60.

Texts and commentaries in translation. Knowledge of Arabic not required. (No prereq. Meets concurrently with MELC 3213, ReIS 3213. Limited to a combined total of 30)

Winter Qtr, ★Sec 1, M, 4:15-7, BlegH 205, AshShareef

Spring Qtr, ★Sec 2, M, 4:15-7, BlegH 205, AshShareef

**Arab 3505 SURVEY OF THE MIDDLE EAST.** 4 credits, \$Hist 3505, MELC 3505, tuition\*: Resident \$344; Non-resident \$997.60.

Lands and peoples of the Middle East, historical evolution of Middle East civilizations and societies, the status of Middle East countries in world affairs. (No prereq. Meets concurrently with Hist 3505, MELC 3505. Limited to a combined total of 35)

Spring Qtr, ★Sec 1, Th, 6:20-8:50, BlegH 350, Tesdell

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**Arab 3544 THE ARAB WORLD IN RECENT TIMES.** 4 credits, \$HIST 3544, \$MELC 3544, tuition\*: Resident \$344; Non-resident \$997.60.

Central Arab lands (the Arabian peninsula, Iraq, Syria, Jordan, Lebanon, Egypt) and North African region (Libya, Tunisia, Morocco, Algeria) from end of World War I to present. Foreign occupation and struggle for independence, position in regional and international politics. (No prereq)

Fall Qtr, Sec 1, W, 6:20-8:50, BlegH 245, Saadallah

Winter Qtr, Sec 2, W, 6:20-8:50, BlegH 340, Saadallah

### Aging studies

(See graduate program in gerontology, page 520)

## Agricultural, Food, and Environmental Sciences (College of)

See course listings for:

- Agricultural and Applied Economics
- Agricultural Education
- Agronomy and Plant Genetics
- Animal Science
- Biosystems and Agricultural Engineering
- Entomology
- Food Science and Nutrition
- Horticultural Science
- Plant Pathology
- Rhetoric
- Soil, Water, and Climate

### College of Agricultural, Food, and Environmental Sciences Professional Experience Program

Students enrolled in the College of Agricultural, Food, and Environmental Sciences may participate in the Professional Experience Program (PEP), which provides opportunity to engage in paid work experiences for 12 or more weeks during fall, winter, spring, or summer. Students of junior standing (90 credits) are eligible for the program which awards 4 credits to those students who satisfactorily complete the program. Tuition is approximately \$350. Students register through any one of the 10 departments of the College of Agricultural, Food,

and Environmental Sciences. Additional information about PEP is available from the College of Agricultural, Food, and Environmental Sciences Career Services office, 272 Coffey Hall on the St. Paul campus (624-2710), or from departmental offices and undergraduate advisers of the college.

## Agricultural and Applied Economics (AgEc)

(231 Classroom Office Building: 625-1222)

### College of Agricultural, Food, and Environmental Sciences

Textbooks for most AgEc courses are available at University of Minnesota Bookstore—St. Paul (624-9200).

Elaine H. Asp, Associate Professor of Consumer Food Science

Jerry Hammond, Professor  
Beth W. Honadle, Professor  
Jean Kinsey, Professor  
Wilbur R. Maki, Professor  
George Morse, Professor  
Willis Peterson, Professor  
Ben Senauer, Professor

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Agricultural and Applied Economics. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**AgEc 5400 INTERMEDIATE MARKET AND PRICE ANALYSIS.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Development of analytical models and their application in various market situations. Unique market institutions that have developed in response to marketing problems and policies. (Prereq 3003 or Econ 1101 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr, Sec 1, MW, 4:05-6, ClaOff B36, STP Campus, Hammond

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**AgEc 5480 FUTURES MARKETS AND PRICES.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Economics of futures trading; the basis and theoretical price relationships in storable and nonstorable commodities; hedging and commercial use of futures markets with illustrations; arbitrage; options on agricultural futures, financial futures; speculation; futures market performance and regulation. (Prereq 1101 and 1102 or Econ 1101 and 1102. Qualified students may register for graduate credit at the University of Minnesota. Limited to 40)

Winter Qtr, ★Sec 1, TTh, 6:10-7:50, ClaOff B25, StP Campus

**AgEc 5550 FOOD MARKETING ECONOMICS.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Economics of food marketing in U.S. Covers food consumption trends; consumer food behavior; food expenditure and consumption data; consumer survey methodology; the food distribution and retailing system; food policy issues related to food marketing. Students pursue individual and group projects. (Prereq 3101 or 3001 or #. Meets concurrently with FScN 5474. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr, ○Sec 1, TTh, 4:30-6:10, McNH 33, StP Campus, Asp, Senauer

**AgEc 5580 HUMAN CAPITAL AND HOUSEHOLD ECONOMICS.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Investment in household formation, children, education, health, labor force participation, and non-market work analyzed in context of household economics and national productivity. Effects of economic variables on investment decisions and returns. (Prereq 3001 or Econ 3101 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, ○Sec 1, MW, 4:30-5:45, ClaOff B36, StP Campus, Kinsey

**AgEc 5620 REGIONAL ECONOMIC ANALYSIS.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Analysis of regional industry and community structure; role of resource, transportation, and institutional constraints; trade, migration and investment in regional growth and change; use of regional economic formation in business investment and location planning. (Prereq 1101 or Econ 1101. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, ○Sec 1, TTh, 4:30-5:45, ClaOff 30, StP Campus, Morse

**AgEc 5630 REGIONAL DEVELOPMENT SYSTEMS.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Population, income, and employment disparities in regional growth and development in selected countries; regional development strategies and institutions for public intervention in regional development process; regional systems and analyses forecasts for economic policy and development planning. (Prereq 1101 or Econ 1101. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr, ○Sec 1, MW, 4:30-5:45, ClaOff B30, StP Campus, Maki

**AgEc 5640 FINANCING STATE AND LOCAL GOVERNMENTS.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40. (IS)

Problems and issues in financing state and local public services in the United States; state and local revenue systems, debt and expenditures; intergovernmental fiscal relations; budget analysis. (Prereq 3001 or Econ 3101 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr, ○Sec 1, Th, 4:30-7:50, VoTech 280, StP Campus, Honadle

*AgEc 5640 is also offered through Group Independent Study. For information, see page 499.*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**AgEc 5790 WORLD FOOD PROBLEMS.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

A multidisciplinary approach to the social, economic, and technical problems of feeding the world's growing population. Principles sought from the social and economic sciences, plant sciences, and animal sciences for the application to food problems. (No prereq. Meets concurrently with Agro 5200, CAPS 5280, and FScN 5643. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension Class) Fall Qtr, ★Sec 1, W, 6-9, ClaOff B35, StP Campus, Peterson

## Agricultural Education (AgEd)

(320 Vocational/Technical Building: 624-2221)

**College of Education and Human Development**  
(Vocational and Technical Education)

Textbooks for most AgEd courses are available at University of Minnesota Bookstore—St. Paul (624-9200).

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Agricultural Education. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

## Agricultural Engineering

See Biosystems and Agricultural Engineering

## Agricultural Engineering Technology (AgET)

(213 Agricultural Engineering: 625-7733)

**College of Agricultural, Food, and Environmental Sciences**

Textbooks for most AgET courses are available at University of Minnesota Bookstore—St. Paul (624-9200).

Philip R. Goodrich, Associate Professor

**Joint Day/Extension Classes**—You may register through Extension for most day school classes scheduled before 4 p.m. in AgET. For a copy of the

current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**AgET 5027 APPROPRIATE TECHNOLOGY FOR INTERNATIONAL DEVELOPMENT.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Definitions, history, and successes and failures of appropriate technology. Social and technical appropriateness. Water supply, treatment, storage, and conveyance. Water pumps, sanitation. Energy: wind, water, solar, grain drying, methane. Building materials. Agricultural machinery and storage. Transfer and adaptation of technology. Addresses the application of technology to solve problems in developing (non-Western) countries. The appropriate technologies must be determined in light of the cultural, socio-economic, and historical perspectives of the people who will be using the technologies. Case examples of successful and non-successful attempts to introduce change are presented and discussed along with the technical information. Small-group interaction is used to explore the reasons for success and failure of different technology. *Meets the Liberal Education International Perspectives requirement.* (Prereq basic understanding of math, chemistry, physics. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension students)

Fall Qtr, ★Sec 1, MW, 5:30-8, AgEng 308, StP Campus, Goodrich

## Agronomy and Plant Genetics (Agro)

(411 Borlaug Hall: 625-7773)

**College of Agricultural, Food, and Environmental Sciences**

Textbooks for most Agro courses are available at University of Minnesota Bookstore—St. Paul (624-9200).

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Agronomy and Plant Genetics. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Agro 5000 PROFESSIONAL EXPERIENCE PROGRAM.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60.

Supervised practical professional experience in agronomic industries and farm enterprise systems, together with studies of various aspects of the industry and related fields. **Must be taken S-N.** (Prereq #. May not be taken for graduate credit)

Fall Qtr, Sec 1, Arr

Winter Qtr, Sec 2, Arr

Spring Qtr, Sec 3, Arr

**Agro 5200 WORLD FOOD PROBLEMS.** 3 credits, \$AgEc 5790, \$FScN 5643, \$CAPS 5280, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

A multidisciplinary approach examining the social, economic, and technical problems of feeding the world's growing population. Principles sought from the social and economic science, plant, animal, and food sciences for their application to world food problems. (Prereq sr or grad student with #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with AgEc 5790, Agro 5200, CAPS 5280, and FScN 5643. A joint Day/Extension class)

Fall Qtr, 0Sec 1, W, 6-9, ClaOff B35, StP Campus

### Alcohol and Drug Counseling Education

(See Family Social Science)

### American Indian Studies (AmIn)

(102 Scott Hall: 624-1338)

#### College of Liberal Arts

Textbooks for most AmIn courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

Carolyn Bordeaux, Lecturer

David O. Born, Professor

Jerry Buckanaga, Lecturer

Jeff Chapman, Lecturer

Pauline Brunette Danforth, Lecturer

Robert Danforth, Lecturer

Ron Libertus, Lecturer

Bill Means, Lecturer

Carol Miller, Associate Professor of American Studies

Lee E. Tollefson, Associate Professor of Architecture

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in American Indian Studies. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**AmIn 1771 INTRODUCTION TO AMERICAN INDIAN STUDIES.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Content, methods, and objectives of American Indian studies. Images of the American Indian, persistence and change in American Indian communities, linguistics and literature, and tribal ethnohistories. (No prereq. Limited to 60)

Winter Qtr, ★0Sec 1, TTh, 4:15-5:30, NichH 211 (A joint Day/Extension class limited to 15 Extension students)

Spring Qtr, ★Sec 2, T, 6:20-8:50, NichH 211

(See also CSch 0310, American Indian Studies: An Overview)

**AmIn 3026 OJIBWE HISTORY AND CULTURE.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

The processes of maintenance and change in Ojibwe culture. (No prereq. Limited to 40)

Fall Qtr, ★Sec 1, Th, 6:20-8:50, ScottH 4, Buckanaga

(See also CSch 0311, Woodland Indian Storytelling)

**AmIn 3036 DAKOTA CULTURE AND HISTORY.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

The processes of maintenance and change in Dakota culture. (No prereq. Limited to 40)

Winter Qtr, ★Sec 1, M, 6:20-8:50, NichH 109

**AmIn 3116 AMERICAN INDIAN LITERATURE.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Comparative studies of oral traditions and modern tribal literature. (No prereq. Limited to 35)

Fall Qtr, ★Sec 1, W, 6:20-8:50, ScottH 4

Spring Qtr, ★Sec 2, W, 6:20-8:50, Mdwakanton Dakota Comm Ctr, 2330 Sioux Trail NW, Prior Lake

**AmIn 3121 HISTORY OF AMERICAN INDIAN EDUCATION.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

American Indian education in the United States; emphasis on educational systems established by the Indian peoples. (Prereq 3111, 3112 or #. Limited to 40)

Winter Qtr, ★Sec 1, T, 6:20-8:50, NichH 122, Buckanaga

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



**AmIn 3211 AMERICAN INDIAN PHILOSOPHIES.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Comparative studies of American Indian philosophies, tribal world views, and sources of ecological consciousness. (No prereq. Limited to 35)

Fall Qtr, ★Sec 1, W, 6:20-8:50, NichH 209  
Spring Qtr, ★Sec 2, Th, 4:15-7, SmithH 121 (A joint Day/Extension class limited to 15 Extension students)

**AmIn 3242 SURVEY OF AMERICAN INDIAN ARTS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Visual arts and crafts of North American Indians; history of American Indian art from pre-contact times to the present. Focus is on the art of the woodlands, plains, Northwest coast, and Southwest regions of North America because of their unique artistic diversity. Discover how American Indian art changed and developed due to internal and external influences. Learn about the four phases of American Indian art—tribal, ethnic, pan-Indian, and contemporary. (No prereq. Limited to 35)

Fall Qtr, ★Sec 1, W, 6:20-8:50, Mdewakanton Dakota Comm Ctr, 2330 Sioux Trail NW, Prior Lake, Libertus

**AmIn 3960 TOPICS IN AMERICAN INDIAN STUDIES: CONTEMPORARY AMERICAN INDIAN ARTS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

American Indians and their art. Historical influences and developments are covered, as are contemporary issues and artists. (No prereq. A joint Day/Extension class limited to 15 Extension students)

Winter Qtr, ★Sec 1, TTh, 4:15-5:30, NichH 122, Chapman

**AmIn 3960 TOPICS IN AMERICAN INDIAN STUDIES: TOURISM, LEISURE, AND THE AMERICAN INDIAN.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Examines how American Indians are portrayed, are understood, and how they participate within selected social contexts of touristic and leisure experience. Topics include interpretation of tourism and leisure, prominent non-Indian images of American Indians, and a variety of social contexts of touristic and leisure experience. (No prereq. Limited to 40)

Winter Qtr, ★Sec 2, W, 6:20-8:50, ScottH 4, Danforth

**AmIn 3960 TOPICS IN AMERICAN INDIAN STUDIES: AMERICAN INDIAN MUSIC IN THE 20TH CENTURY.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

The diversity of North American Indian musical traditions. Concentrates on music tradition within the western Great Lakes region, including songs of the Anishinabe (Ojibwe), Winnebago, and intertribal groups. Focuses on pow wows as well as precedents within the "Big Drum" religion. Emphasizes reading, writing, and listening to American Indian music, and learning social and intertribal songs. (No prereq. Limited to 35)

Spring Qtr, ★Sec 3, W, 6-8:30, ScottH 4, Danforth

**AmIn 3960 TOPICS IN AMERICAN INDIAN STUDIES: AMERICAN INDIAN LAW.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60. (No prereq. Limited to 35)

Spring Qtr, ★Sec 4, Th, 6-8:30, ScottH 4

(See also CSc 0309, American Indian Tribal Government)

**AmIn 5341 CONTEMPORARY AMERICAN INDIAN MOVEMENTS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Contemporary Indian organizations and social movements during the 20th century. Exploration of political activism on and off reservations, treaty disputes, economic developments, and revival of traditions. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr, Sec 1, M, 6:20-8:50, NichH 207, Means

**AmIn 5411 URBAN INDIAN COMMUNITIES.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Social science and historical analysis of termination policies and rapid city-ward Indian migration since World War II. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr, Sec 1, W, 6:20-8:50, NichH 109, Means

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**AmIn 5461 TOPICS IN AMERICAN INDIAN STUDIES: AMERICAN INDIAN ARCHITECTURE.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Historic and contemporary principles and theories of North American Indians' architecture. Study of culture, technology, environment, art, and craft of North American Indians in their settlements and architecture. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 35)

Spring Qtr, ★Sec 1, M, 6-8:30, NichH 216, Tollefson

**AmIn 5990 DIRECTED RESEARCH: A TRIP TO THE SOUTHWEST.** 1-15 credits, tuition\* each credit: Resident \$86; Non-resident \$249.40; Resident Graduate credit \$118; Non-resident Graduate credit \$259.60; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Independent research under faculty guidance. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Spring Qtr, ★●Sec 1, Arr, Libertus

### American Sign Language

See Educational Psychology

### American Studies (AmSt)

(104 Scott Hall: 624-4190)

#### College of Liberal Arts

Textbooks for most AmSt courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

*All American Studies courses are open to nonmajors.*

(See also History; and *Social Sciences, Public Issues, and Humanities* in Compleat Scholar non-credit section)

William H. Agee, Lecturer

Roland Delattre, Professor

Lary May, Associate Professor

Carter Meland, Teaching Assistant

Carol A. Miller, Associate Professor of American Studies

Riv-Ellen Prell, Associate Professor

### A major in American Studies can be completed in the evening.

Most courses required for the major are offered at least every two years. Certain courses, however, may be offered less frequently. It may be necessary occasionally for students seeking a B.A. in American Studies to take some classes during the day in order to graduate. Interested students should discuss plans with a teacher of American Studies courses or with a CEE counselor (625-2500).

#### B.A. Major Sequence

Required Preparatory Courses 12 credits from 1001, 1002, 1003, 3111, 3112, 3113. Recommended but not required are Hist 1301, 1302 (Survey of American History)

Major Requirements—68 credits, taken A-F and with grades of C or better, distributed as follows:

*Area Requirements:* American Studies students choose (with adviser approval) a total of 44 credits of 3000 or 5000 level courses related to American culture. These must include 8 to 12 credits in each of the following four areas: American history; American literature; social sciences in the United States; American art history, music, or philosophy. A list of the many courses which meet these requirements may be obtained in the American Studies office, 104 Scott Hall.

*Junior Proseminar:* AmSt 3299 (4 credits)

*Senior Proseminar:* AmSt 3301-3302-3303 (12 credits total)

12 credits in foreign civilization (must be 3000 or 5000 level courses) chosen in consultation with major adviser.

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in American Studies. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

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

**Continuing Education for Women (CEW) section available in the following course:** AmSt 1001

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**AmSt 1001 AMERICAN CULTURES I: ORIGINS THROUGH MID-19TH CENTURY.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20. (IS)

Interdisciplinary study of selected class, gender, public policy, and social issues by comparing the cultures and artistic expression of at least three of the following groups: European American, African American, American Indian, Chicano/Latino, and Asian American. Meets CLA Cultural Pluralism requirement. (No prereq. Limited to 35)

Fall Qtr, ★Sec 1, T, 6:20-8:50, ScottH 4, Agee

Fall Qtr, ★Sec 2, F, 9:30 a.m.-12, MacP, Meland.

*Offered through Continuing Education for Women*

**AmSt 1002 AMERICAN CULTURES II: MID-19TH CENTURY TO 1920S.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20. (IS)

Interdisciplinary study of selected class, gender, public policy, and social issues by comparing the cultures and artistic expression of at least three of the following groups: European American, African American, American Indian, Chicano/Latino, and Asian American. Meets CLA Cultural Pluralism requirement. (No prereq. Limited to 35)

Winter Qtr, ★Sec 1, T, 6:20-8:50, ScottH 4, Agee

**AmSt 1003 AMERICAN CULTURES III: 1920S TO THE PRESENT.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20. (IS)

Interdisciplinary study of selected class, gender, public policy, and social issues by comparing the cultures and artistic expression of at least three of the following groups: European American, African American, American Indian, Chicano/Latino, and Asian American. Meets CLA Cultural Pluralism requirement. (No prereq. Limited to 35)

Spring Qtr, ★Sec 1, T, 6:20-8:50, ScottH 4, Agee

**AmSt 3111 CREATIVE AMERICANS AND THEIR WORLDS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

A study of the ways in which the works of selected American writers, painters, architects, filmmakers, and other artists can illuminate tensions and conflicts which have arisen out of a dual commitment by Americans to values located in nature and the natural landscape, on the one hand, and, on the other, to values associated with technological progress and ever-higher levels of affluence. "The myth of the garden" in literature and painting. Significance of paintings of urban-technological landscapes. The development of the skyscraper and of the "Chicago School" of modern architecture. The work and ideas of Frank Lloyd Wright. Contemporary issues relating to technology and the

environment considered from the perspectives provided by the artists and writers we have studied. Readings of varying lengths from Crèvecoeur, Emerson, Thoreau, Mark Twain, Frank Norris, and Tom Wolfe. (No prereq. Limited to 35)

Fall Qtr, ★Sec 1, M, 6:20-8:50, ScottH 4, Agee

**AmSt 3112 AMERICAN EVERYDAY LIFE.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

A study of the ways in which the works of selected American writers, painters, architects, filmmakers, and creators of the popular arts can illuminate the changing roles which men and women have played in their everyday lives, especially in relation to the historical evolution of work and the family. The religious roots of traditional work and family roles for men and women. The development of the male ethos and the success ideal. The female ethos and the ideal of domesticity. The movement away from traditional roles, ideals, and ethical norms in modern everyday life. The sexual revolution. Women and the success ideal. Emergent patterns of family life. Readings of varying length from Franklin, Norris, Lewis, Wolfe, and others. (No prereq. Limited to 35)

Winter Qtr, ★Sec 1, M, 6:20-8:50, ScottH 4,

Agee

**AmSt 3113 AMERICAN CULTURAL DIVERSITY.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

A study of some ways in which the works of selected writers, painters, architects, filmmakers, and creators of the popular arts can illuminate forces for diversity and unity in modern America. The focus is on the cultural expression, values, and lifestyles of members of minority and majority cultures, with an emphasis on members of black and white cultures of the American South during the last century. Meets CLA Cultural Pluralism requirement. (No prereq. Limited to 35)

Spring Qtr, ★Sec 1, M, 6:20-8:50, ScottH 4,

Agee

(See also CSch 0107, Somewhere Under the Rainbow: Multicultural Art in America)

**AmSt 3299 PROSEMINAR: AMERICAN STUDIES.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Exploration of the classic works in American Studies. (Prereq American Studies major. A joint Day/Extension class limited to 7 Extension students)

Winter Qtr, ★Sec 1, W, 6:20-8:50, ScottH 2,

Prell

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**AmSt 3301-3302-3303 PROSEMINAR: AMERICAN STUDIES.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Each quarter covers a problem related to a representative theme, figure, or period. Students research and write senior theses. Required of majors. (Prereq American Studies major. A joint Day/Extension class limited to 15 Extension students)

Fall Qtr, 3301, ★●Sec 1, W, 6:20-8:50, ScottH 2, Delattre

Winter Qtr, 3302, ★●Sec 1, W, 6:20-8:50, ScottH 2, May

Spring Qtr, 3303, ★●Sec 1, W, 6:20-8:50, ScottH 2, May

**AmSt 5920 TOPICS: PLACE, POWER, AND CULTURE IN AMERICAN LITERATURES.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Drawing on interdisciplinary readings from foundational texts such as *Imperial Eyes: Travel Writing and Transculturation* (1992) by Mary Louise Pratt, and *Mapping American Culture* (1992) by Franklin and Steiner, this course will examine how representations of place and American landscapes have been and continue to be sites of contended authority influencing national identities and relationships of power and cultural interaction. Particular attention will focus on manifestations of cultural authority deriving from narrative imagery of place in works by Thoreau, Hawthorne, Hemingway, and Faulkner in relation to contrasting conceptions in contemporary American Indian literature by Scott Momaday, Leslie Silko, Louise Erdrich, Michael Dorris, and others. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with LS 5100, sec 4. Limited to a combined total of 25)

Winter Qtr, ★Sec 1, W, 6:20-8:50, NichH 209A, Miller

### Ancient Near Eastern Studies, Hebrew, and Jewish Studies

See Classical and Near Eastern Studies

### Ancient Studies

See Interdisciplinary Archaeological Studies

### Animal Science (AnSc)

(122 Peters Hall: 624-2722)

#### College of Agricultural, Food, and Environmental Sciences

Textbooks for most AnSc courses are available at University of Minnesota Bookstore—St. Paul (624-9200).

(See also College of Veterinary Medicine)

**Joint Day/Extension Classes**—You may register through Extension for most day school classes scheduled before 4 p.m. in Animal Science. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

*No AnSc courses offered through Extension Classes 1995-96.*

### Anthropology (Anth)

(215 Ford Hall: 625-3400)

#### College of Liberal Arts

Textbooks for most Anth courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

(See also Interdisciplinary Archaeological Studies; General College courses in Social Issues; and *Social Sciences, Public Issues, and Humanities* in Compleat Scholar noncredit section)

Kathleen Barlow, Lecturer  
Luther Gerlach, Professor  
Lisette Josephides, Assistant Professor  
David Lipset, Associate Professor  
Frank C. Miller, Professor  
Mischa Penn, Associate Professor  
William L. Rowe, Professor  
Marc Schiltz, Lecturer  
Peter S. Wells, Professor

**Most courses needed for a major in Anthropology can be completed in the evening.**

Interested students should discuss plans with an adviser (625-2500).

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

Required Preparatory Courses 1101, 1102

#### Major Requirements

(1) Two of the following courses: Anth 3111, 3201, 3302, 3366 (9-10 cr); (2) Either Anth 5104 or 5592 (4 cr); (3) Five electives from 3xxx and 5xxx courses, two of which must be at the 5xxx level (minimum of

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

20 cr.); senior project completed through direct research or senior seminar (4 cr).

Students should consult Undergraduate Handbook and Department advisers regarding recommended courses for subfield concentrations, i.e., archaeology social/cultural and physical anthropology.

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

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Anthropology. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**Continuing Education for Women (CEW) section available in the following course:** Anth 1102

**Anth 1101 HUMAN ORIGINS.** 5 credits, \$1001, tuition\*: Resident \$397.50; Non-resident \$1152.75. (IS)

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. Limited to 30)

Winter Qtr, ★Sec 1, T, 6:20-9:30, FordH 285

**Anth 1102 UNDERSTANDING CULTURES.** 5 credits, \$1002, tuition\*: Resident \$397.50; Non-resident \$1152.75. (IS)

Varieties and range of human behavior as revealed through comparative study of cultures in all parts of the world. Sec 3, offered through Continuing Education for Women, is a cross-cultural approach to the study of systems of beliefs and patterns of customary behavior. The following topics will be examined from a comparative perspective: language and communication, kinship and family, sex roles, cultural ecology, economic systems, law and politics, religion and world view, cultural change. (No prereq)

Fall Qtr, Sec 1, M, 6:20-9:30, FordH 155, Gerlach  
Winter Qtr, Sec 2, T, 9 a.m.-12, MacP. *Offered through Continuing Education for Women*

Winter Qtr, Sec 3, W, 6:20-9:30, FordH 155, Lipset  
Spring Qtr, Sec 4, T, 6:20-9:30, FordH 155

**Anth 3003 THE RISE OF CIVILIZATION.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Beginnings of agriculture and emergence of world civilizations. Development of state societies from an archaeological perspective. (No prereq)

Spring Qtr, Sec 1, T, 6:20-8:50, FordH 285, Wells

(See also CSch 0348, Rise of Civilization: The New World)

**Anth 3111 INTRODUCTION TO ARCHAEOLOGY.** 5 credits, tuition\*: Resident \$430; Non-resident \$1247.

Introduction to the fundamentals of archaeological field and laboratory analysis. (No prereq)

Fall Qtr, Sec 1, Th, 6:20-9:30, FordH 55, Wells

(See also CSch 0346, Archaeology: What is an Archaeological Lab?)

**Anth 3131 RELIGION AND CULTURE.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Anthropological perspectives on religion. Religion in relation to social order and individual life cycle. Religion and cultural change. (Prereq 1102 or #)

Fall Qtr, Sec 1, M, 6:20-8:50, FordH 120, Penn

**Anth 3201 APPROACHES IN CULTURAL ANTHROPOLOGY.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Humanistic and scientific conceptions of culture. Interpretation and explanation. Theoretical foundations of current anthropological thought. (Prereq 1102 or #)

Spring Qtr, Sec 1, Th, 6:20-8:50, FordH 285,

Josephides

**Anth 3241 PEOPLES AND CULTURES OF AFRICA.** 4 credits, \$Afro 3501, tuition\*: Resident \$344; Non-resident \$997.60.

Key aspects of society, culture, and ecological adaptation of African people south of the Sahara. Aesthetic expression, social, economic, political, and religious systems. Theoretical problems in African anthropology. (No prereq)

Winter Qtr, Sec 1, T, 6:20-8:50, FordH 120,

Schiltz

**Anth 3303 WOMEN: ANTHROPOLOGICAL PERSPECTIVES.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Cross-cultural, comparative study of women and gender. Theoretical and methodological approaches in anthropology to the study of gender. (Prereq 1102; WoSt 1001, 1002 recommended)

Spring Qtr, Sec 1, M, 6:20-8:50, FordH 285,

Barlow

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Anth 5151 CULTURAL CHANGE AND DEVELOPMENT.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Processes of cultural change: invention, innovation, diffusion, and acculturation. Theories of modernization, dependency, and world-systems. Roles of anthropologist in development programs. (Prereq 1102 or 5102 or #. Qualified students may register for graduate credit at the University of Minnesota) Fall Qtr, Sec 1, W, 6:20-8:50, FordH 285, Miller

**Anth 5152 ANTHROPOLOGY OF SOCIAL MOVEMENTS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Cross-cultural study of the nature, process, and function of social, political, and religious movements of change. Theories and case studies, including Christianity and Islam, Asia, Africa, and the United States. (Prereq 1102 or 5102 or #. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr, Sec 1, Th, 6:20-8:50, FordH 115, Gerlach

**Anth 5178 ARCHEOLOGY OF NORTHERN EUROPE.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Archaeology of Scandinavia, northern Germany, and neighboring regions in the Bronze and Iron Ages and the Roman and Migration Periods. Trade, growth of towns, and changing art, ritual, and religion. (Prereq 1101, 3003 or 3371 or #. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr, Sec 1, Th, 6:20-8:50, FordH 285, Wells

**Anth 5392 PHILOSOPHICAL ANTHROPOLOGY.** 4 credits, tuition\*: Resident Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Survey of a cluster of traditional probes associated with major views on human nature and culture. Variations on these views and specific arguments of relativists, phenomenologists, behaviorist. Recent ethnographic theory. (Prereq 1102 or 5102. Quali-

fied students may register for graduate credit at the University of Minnesota)

Spring Qtr, Sec 1, M, 6:20-8:50, FordH 115, Penn

**Anth 5920 TOPICS IN ANTHROPOLOGY: ANTHROPOLOGY OF AIDS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Analysis of Acquired Immune Deficiency Syndrome (AIDS) phenomena in its cultural, social, economic, medical, and psychological dimensions. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr, Sec 1, TTh, 4:30-6, FordH 50, Rowe

(See also PubH 5010, Public Health Approaches to AIDS)

## Arabic

(See Afro-American and African Studies)

## Archaeology

(See Anthropology; Classical Studies)

## Architecture (Arch)

(110 Architecture: 624-7866)

### College of Architecture and Landscape Architecture

Textbooks for most Arch courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

(See also Landscape Architecture; Art History; and *Art and Architecture* in Compleat Scholar noncredit section)

John Carmody, Assistant Director,  
Underground Space Center

Paul Damon, Lecturer

Dennis Grebner, Professor

Mary Guzowski, Assistant Professor

James Lammers, Lecturer

Douglas A. Lew, Lecturer

Robert Mack, Lecturer

William Morrish, Associate Professor

Garth Rockcastle, Professor

Leon Satkowski, Professor

Jeff Scherer, Assistant Professor

Katherine Solomonson, Assistant Professor

Marshall Tanick, Lecturer

J. Stephen Weeks, Associate Professor

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**Degree programs in Architecture**

The study of architecture combines history, science, and the arts as foundations for the pursuit of a career in architecture. The Department of Architecture seeks students with demonstrated academic, technical, artistic, and creative skills. Above all, successful majors must demonstrate a capacity to think and make for themselves, and work both collectively and independently. While a degree program in architecture is not offered through Extension, a majority of the preparatory and required course work for the Bachelor of Arts with a major in Architecture can be completed through Extension. At the University of Minnesota, students are admitted by the Department of Architecture to the Bachelor of Arts with a major in Architecture after having completed 90 credits of prerequisite and general education classes and maintaining a GPA of 2.50 in cumulative credits and the required Architecture prerequisites.

For preparatory course work descriptions, see the bulletins for the College of Liberal Arts or the College of Architecture and Landscape Architecture. The College of Architecture and Landscape Architecture bulletin outlines the B.A. degree program in detail, and can be requested by calling (612) 625-2008. For further information, contact an architecture adviser at 110 Architecture, (612) 626-1000. The B.A. in Architecture is available through the College of Liberal Arts. For advising, contact a CEE adviser at (612) 625-2500.

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Architecture. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**Arch 1031 VISUAL THINKING.** 4 credits, tuition\* (includes \$5 course fee): Resident \$323; Non-resident \$927.20.

Conceptual thinking, visual understanding, introduction to "R-Mode" (right hemisphere brain) through observation, conception, and drawing, Translation from verbal/logical thinking to creative intuitive. (No prereq. Limited to 30)

Fall Qtr, ★Sec 1, T, 6:10-9:20, Arch 55, Grebner

**Arch 1301 INTRODUCTION TO ARCHITECTURAL DRAWING.** 4 credits, §LA 1301, tuition\* (includes \$25 course fee): Resident \$343; Non-resident \$947.20.

Emphasizes visualization and drawing of form and space in the physical environment. Explores basic elements of form using design drawing systems and conventions. Development of skills in visual literacy and expression through drawing. **Must be**

**taken A-F. Prerequisite for the major.** (No prereq. Limited to 32)

Fall Qtr, ★Sec 1, MW, 5:30-8:30, Arch 15

Winter Qtr, ★Sec 2, TTh, 5:30-8:30, Arch 40

Spring Qtr, ★Sec 3, MW, 5:30-8:30, Arch 40

**Arch 1401 THE DESIGNED ENVIRONMENT.** 4 credits, §LA 1401, tuition\* (includes \$25 course fee): Resident \$343; Non-resident \$947.20.

Principles and traditions within the design disciplines of architecture, landscape architecture, and urban design, along with references in the arts, sciences, and literature, will be explored in this review of the formal constructs of the designed environment. **Must be taken A-F. Prerequisite for the major.** (No prereq. Lectures meet concurrently. Meets concurrently with LA 1401. A joint Day/Extension class; each section limited to a combined total of 50 Extension students)

Fall Qtr, ★Sec 1, Lect T, 3-4:45, SmithH 100; Rec Th, 9-10:30 a.m.

Fall Qtr, ★Sec 2, Lect T, 3-4:45, SmithH 100; Rec Th, 10:30 a.m.-12

Fall Qtr, ★Sec 3, Lect T, 3-4:45, SmithH 100; Rec Th, 3-4:45

Winter Qtr, ★Sec 4, Lect T, 3-4:45, SmithH 100; Rec Th, 9-10:30 a.m., Arr, Damon

Winter Qtr, ★Sec 5, Lect T, 3-4:45, SmithH 100; Rec Th, 10:30 a.m.-12, Arr, Damon

Winter Qtr, ★Sec 6, Lect T, 3-4:45, SmithH 100; Rec Th, 3-4:45, Arr, Damon

**Arch 1601 DESIGN PROFESSIONS AND SOCIETY.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Introduction to issues and roles citizens, civic structures, entrepreneurs, clients, and design professions address in the process of shaping, constructing, and managing the physical environment. Examination of planning procedures, policy creation, and decision-making strategies used in formulating projects intended to maintain an aesthetic, ecologically functional and equitable physical environment. *Prerequisite for the major.* (No prereq. A joint Day/Extension class limited to 50 Extension students)

Spring Qtr, ★Sec 1, Lect MW, 8-9:55, NichH 45; Rec T, 8-8:50 a.m., Arch 10, Scherer, Morrish, Rockcastle

Spring Qtr, ★Sec 2, Lect MW, 8-9:55, NichH 45; Rec T, 9:05-9:55 a.m., Arch 10, Scherer, Morrish, Rockcastle

Spring Qtr, ★Sec 3, Lect MW, 8-9:55, NichH 45; Rec Th, 8-8:50 a.m., Arch 10, Scherer, Morrish, Rockcastle

Spring Qtr, ★Sec 4, Lect MW, 8-9:55, NichH 45; Rec Th, 9:05-9:55 a.m., Arch 10, Scherer, Morrish, Rockcastle

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Arch 3311 DRAWING FOR DESIGN.** 4 credits, §LA 3311, tuition\* (includes \$25 course fee): Resident \$399; Non-resident \$1109.60.

Explores drawing processes as modes of perception, cognition, and reflection. Representational aspects of drawing systems and conventions, develops understanding of space, light, and order. **Must be taken A-F. Required for the major.** (Prereq Arch or BED major, Arch 1301 or LA 1301 or #. Limited to 25)

Fall Qtr, ★Sec 1, TTh, 5:30-8:30, Arch 40

Winter Qtr, ★Sec 2, MW, 5:30-8:30, Arch 55

Spring Qtr, ★Sec 3, MW, 5:30-8:30, Arch 20

**Arch 3321 COLOR THEORY/USE IN ARCHITECTURE.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60.

Survey of color as a design element, color theory, the physics of color, substance, interaction and use; symbolism and color effects and use; architectural application of principles and theory. (No prereq. Limited to 30)

Winter Qtr, ★Sec 1, T, 6:10-9:20, Arch 30,  
Grebner

**Arch 3411 HISTORY OF ARCHITECTURE TO 1750.** 4 credits, §LA 3411, §ArH 3411, tuition\* (includes \$5 course fee): Resident \$379; Non-resident \$1089.60.

History of architecture and city planning from antiquity to 1750, as illustrated by major monuments from Western and non-Western cultures. **Must be taken A-F. Required for the major.** (No prereq. Meets concurrently with LA 3411, ArH 3411. Limited to a combined total of 100)

Fall Qtr, ★Sec 1, Th, 5:30-8:40, Arch 25,  
Satkowski

**Arch 3412 HISTORY OF ARCHITECTURE SINCE 1750.** 4 credits, §LA 3413, tuition\* (includes \$5 course fee): Resident \$379; Non-resident \$1089.60.

A history of major monuments, concepts, and theories of architecture and urbanism since 1750. **Must be taken A-F. Required for the major.** (No prereq. Meets concurrently with LA 3412, ArH 3412. Limited to a combined total of 100)

Winter Qtr, ★Sec 1, Th, 5:30-8:40, Arch 25,  
Solomonson

**Arch 3501 PEOPLE, ECOLOGY, AND DESIGN.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60.

A survey of issues, design procedures, and short- and long-term impacts of development decisions made by architects and landscape architects in terms of local and global ecological systems. **Must be taken A-F. Required for the major.** (Prereq Arch major, 3311, 3412 or #. A joint Day/Extension class limited to 25 Extension students)

Winter Qtr, ★Sec 1, Lect MW, 3:35-5:30, Arch 10; Rec M, 8-8:50 a.m., Arch 10, Guzowski

Winter Qtr, ★Sec 2, Lect MW, 3:35-5:30, Arch 10; Rec M, 9-9:55 a.m., Arch 10, Guzowski

**Arch 5281 ARCHITECTURE STUDIO I: FUNDAMENTALS OF SPACE AND FORM.** 6 credits, tuition\* (includes \$25 course fee): Resident \$586; Non-resident \$1651.90.

Introduction to elements of architecture, qualities of space, principles of design and systems of order found in everyday objects, experiences, and forms of nature. Application of visual tools—models, drawings, and graphics—and design principles to three-dimensional form and composition. Lecture, critique, and small design problems. **Must be taken A-F. Required for the major.** (Prereq Arch major, 3412 and 3311 or #. May not be taken for graduate credit at the University of Minnesota. Limited to 16)

Fall Qtr, ★Sec 1, MW F, 1:25-5:30, Arch 230

Winter Qtr, ★Sec 2, MWF, 1:25-5:30, Arch 230

Spring Qtr, ★Sec 3, MWF, 1:25-5:30, Arch 230

**Arch 5282 ARCHITECTURE STUDIO II: STRUCTURE AND ORDER.** 6 credits, tuition\* (includes \$25 course fee): Resident \$586; Non-resident \$1651.90.

Application of design processes in developing understandings of the relationship between architecture and meaning. Creation of order, architectural form and space within the context of cultural and technological conditions of our time. Exploration of structure systems within the context of increasingly complex design projects. Lecture, design projects, and critiques. **Must be taken A-F. Required for the major.** (Prereq 5281, Arch major or #. May not be taken for graduate credit at the University of Minnesota. Limited to 16)

Fall Qtr, ★Sec 1, MWF, 1:25-5:30, Arch 230

Winter Qtr, ★Sec 2, MWF, 1:25-5:30, Arch 230

Spring Qtr, ★Sec 3, MWF, 1:25-5:30, Arch 230

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



**Arch 5283 ARCHITECTURE STUDIO III: SITE, CONTEXT, AND FORM.** 6 credits, tuition\* (includes \$25 course fee): Resident \$586; Non-resident \$1651.90.

Development of architectural form and space within the context of a specific site and building program. Exploration of materials and structure systems within the context of increasingly complex design projects. Lecture, design projects, and critiques. **Must be taken A-F. Required for the major.** (Prereq Arch 5282, Arch major or #. May not be taken for graduate credit at the University of Minnesota. Limited to 16)

Fall Qtr, ★Sec 1, MWF, 1:25-5:30, Arch 230

Winter Qtr, ★Sec 2, MWF, 1:25-5:30, Arch 230

Spring Qtr, ★Sec 3, MWF, 1:25-5:30, Arch 230

**Arch 5313 VISUAL COMMUNICATION TECHNIQUES IN ARCHITECTURE.** 4 credits, §3033, tuition\* (includes \$25 course fee): Resident \$399; Non-resident \$1109.60; Resident Graduate credit \$497; Non-resident Graduate credit \$1063.40; Resident Graduate School credit \$887; Non-resident Graduate School credit \$1921.40.

Exploration and use of delineation, presentation, and design techniques. Various visual media and methods of investigation. (Prereq Arch/BED major, 3311 or #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 30)

Spring Qtr, ★Sec 1, T, 6:10-9:20, Arch 55, Grebner

**Arch 5321 ARCHITECTURE IN WATER-COLOR.** 4 credits, §3110, tuition\* (includes \$25 course fee): Resident \$399; Non-resident \$1109.60; Resident Graduate credit \$497; Non-resident Graduate credit \$1063.40; Resident Graduate School credit \$887; Non-resident Graduate School credit \$1921.40.

Watercolor as representation and communication in the design process. Foundation principles, techniques, medium, tools, and materials exploration. (Prereq Arch major, BED, 3311 or #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 16)

Spring Qtr, ★Sec 1, M, 5:30-9, Arch 55, Lew

**Arch 5351 AUTO CAD I.** 4 credits, tuition\* (includes \$40 course fee): Resident \$414; Non-resident \$1124.60.

Basic concepts, tools, and techniques of computer-aided drawing with an introduction to current AutoCAD Release. Strategies and techniques for producing dimensioned and annotated drawings

suitable for plotting, and an introduction to three-dimensional drawing capabilities. Use of dimension variables, attributes, blocks, symbols, and the creation of customized menus. Students complete a basic drawing project. Class sessions will include a brief demonstration and discussion followed by individual hands-on training in drawing examples of architectural construction documents. No prior computing experience is necessary. (Prereq Arch major or #. May not be taken for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 6 Extension students)

Fall Qtr, ★Sec 1, W, 6:10-9:20, Arch 145

Winter Qtr, ★Sec 2, W, 6:10-9:20, Arch 145

Spring Qtr, ★Sec 3, W, 6:10-9:20, Arch 145

**Arch 5352 AUTO CAD II.** 4 credits, tuition\* (includes \$40 course fee): Resident \$414; Non-resident \$1124.60.

Intermediate concepts, tools, and techniques of computer-aided drawing with current AutoCAD Release. Strategies and techniques for producing dimensioned and annotated drawing suitable for plotting. Use of dimension variables, attributes, blocks, symbols, and the creation of customized menus. Students complete a drawing project of intermediate complexity. Class sessions will include a brief demonstration and discussion followed by individual hands-on training in drawing examples of architectural construction documents. (Prereq Arch major, 5351 or #. May not be taken for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 6 Extension students)

Fall Qtr, ★Sec 1, Sa, 9 a.m.-12:30, Arch 145

Winter Qtr, ★Sec 2, Sa, 9 a.m.-12:30, Arch 145

Spring Qtr, ★Sec 3, Sa, 9 a.m.-12:30, Arch 145

**Arch 5411 HISTORIC PRESERVATION.** 4 credits, tuition\* (includes \$5 course fee): Resident \$379; Non-resident \$1089.60; Resident Graduate credit \$477; Non-resident Graduate credit \$1043.40; Resident Graduate School credit \$867; Non-resident Graduate School credit \$1901.40.

Philosophy and theory of historic preservation, historic origins, building documentation, technology of building conservation, historical archaeology, economic considerations, preservation law, guidelines for preservation, and case studies of representative preservation projects. (Prereq 1021 or #. Intended for advanced students in architecture, but open to the architectural profession and to any student who has fulfilled the prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr, Sec 1, TTh, 5:15-7, Arch 30, Mack

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Arch 5413 HISTORIC BUILDING RESEARCH AND DOCUMENTATION.** 4 credits, tuition\* (includes \$5 course fee): Resident \$379; Non-resident \$1089.60; Resident Graduate credit \$477; Non-resident Graduate credit \$1043.40; Resident Graduate School credit \$867; Non-resident Graduate School credit \$1901.40.

Philosophy, theory, and method of historic building research, descriptive analysis of buildings, building documentation, historical archaeology, and architectural taxonomy. (Prereq 5411 or #. Intended for students in architecture, but open to any student who has fulfilled the prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr, Sec 1, TTh, 5:15-7, Arch 25, Mack

**Arch 5512 HISTORIC BUILDING CONSERVATION.** 4 credits, tuition\* (includes \$5 course fee): Resident \$379; Non-resident \$1089.60; Resident Graduate credit \$477; Non-resident Graduate credit \$1043.40; Resident Graduate School credit \$867; Non-resident Graduate School credit \$1901.40.

Historic building systems, materials and methods for their conservation; introduction of contemporary systems in historic buildings. (Prereq 5411 or #. Intended for students in architecture, but open to any student who has fulfilled the prereq. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr, Sec 1, TTh, 5:15-7, Arch 35, Mack

**Arch 5523 LIGHT FRAME BUILDINGS: DESIGN FOR ENERGY EFFICIENCY, HEALTH, AND DURABILITY.** 4 credits, tuition\* (includes \$5 course fee): Resident \$379; Non-resident \$1089.60; Resident Graduate credit \$477; Non-resident Graduate credit \$1043.40; Resident Graduate School credit \$867; Non-resident Graduate School credit \$1901.40.

Design and construction principles, problems, and solutions for housing and small commercial structures that improve comfort and energy efficiency. Building envelope assemblies—roof, wall, and foundations—and their integration with basic building systems. Discussion and resolution of common problems associated with these construction methods, such as infiltration, degradation from moisture, and poor indoor air quality. (Prereq 3062, 3064 or #. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr, Sec 1, W, 6:15-9:20, CivE 213,  
Carmody, Weeks

**Arch 5631 LEGAL CONTRACTS IN ARCHITECTURE.** 4 credits, \$5127, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Legal subject matter relevant to the work of architects and design professionals. **Must be taken A-F.** (Prereq 3093 or #. Qualified students may register for graduate credit at the University of Minnesota) Winter Qtr, Sec 1, W, 6:15-9:20, Arch 20, Tanick

**Arch 5645 REAL ESTATE DEVELOPMENT IN ARCHITECTURE.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Fundamentals of real estate development and investment building. Processes and rules of specialists in development of investment projects. Topics include proforma, tax shelter, feasibility, market analysis, appraisal equity financing, design, construction, leasing, property management. (Prereq arch maj or #. A joint Day/Extension class limited to 6 Extension Students. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr, ★○Sec 1, Th, 6:30-9, Arch 50,  
Lammers

**Arch 5970 DIRECTED STUDY.** Credits arranged. Each credit: Resident \$93.50; Non-resident \$271.15; Resident Graduate credit \$118; Non-resident Graduate credit \$259.60; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

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. (Prereq written #. Qualified students may register for graduate credit at the University of Minnesota.) Contact Prof. Garth Rockcastle, 110 Arch, University of Minnesota, Minneapolis, Minnesota 55455 (624-7866).

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**Architecture Continuing Professional Education Courses**

*For a more information about Architecture Continuing Professional Education courses offered during 1995-96 at the University of Minnesota, telephone (612) 624-1641.*

*All 0xxx-level Arch courses must be taken S-N.*

**Arch 0015 MARKETING ARCHITECTURAL SERVICES.** No credit, tuition\* (includes \$10 special fee): \$169.

This eight-week series addresses marketing professional architectural/engineering services as the critical point of departure for the creative and successful practice of both small and large organizations. The fundamentals of planning, management, and implementation of the business development process for research, lead generation, qualifications, strategizing, proposals, presentations, and contract closing. **Must be taken S-N.** (No prereq)

Winter Spec Term, Sec 1, M, 6:10-9:20, Jan.

8-Mar. 5 (8 meetings—no class Jan. 15), Arch 35, Luers

**Contract Document Series**

A three-course series intended to provide the intern architect with an in-depth understanding of the technical and administrative aspects of contract documents, bidding, and construction phases of architectural practice. Courses are designed to fulfill categorical IDP requirements in addition to preparing the intern to perform more effectively in the office and be more adequately prepared for the registration exams. Each course consists of eight meetings and is structured to involve the student in an interactive format using lecture/demonstrations, group discussion, and hands-on assignments with instructor feedback.

The Contract Document Series courses are not being offered during 1995-96, but are tentatively scheduled for 1996-97.

**Architectural Registration Exam (A.R.E.) Review Courses**

**Arch 0009 A.R.E. REVIEW COURSE.** No credit, tuition\* (includes \$10 special fee): \$169.

Conceptual/intuitive approach to structural systems for those in need of more than a minor review, and exam preparation. **Must be taken S-N.** (No prereq)

Fall Spec Term, Sec 1, Th, 6:10-9, Sept. 28-Nov.

30, Arch 55, Seiberlich

**Arch 0010 A.R.E. REVIEW COURSE.** No credit, tuition\* (includes \$10 special fee): \$169.

Preparation for professional registration examinations. Structural design—Sections DF and E. **Must be taken S-N.** (No prereq)

Winter Spec Term, Sec 1, Th, 6:10-9, Jan.

11-Mar. 7, Arch 55, Seiberlich. *No late fee through Jan. 4*

**Arch 0011 A.R.E. REVIEW COURSE.** No credit, tuition\* (includes \$10 special fee): \$169.

Preparation for professional registration examinations. Mechanical, Plumbing, Electrical, Life Safety Systems—Section G. **Must be taken S-N.** (No prereq)

Spring Spec Term, Sec 1, T, 6:10-9, Mar. 26-May 14, Arch 60, Seiberlich

**Arch 0012 A.R.E. REVIEW COURSE.** No credit, tuition\* (includes \$10 special fee): \$169.

Preparation for professional registration examinations. Site and Building Design—Sections A, B, C. **Must be taken S-N.** (No prereq)

Spring Spec Term, Sec 1, Th, 6:10-9, Mar.

28-May 23, Arch 35, Seiberlich

**Area Studies Programs**

(223 Social Sciences: 624-8543)

**College of Liberal Arts**

Textbooks for most courses offered through Area Studies Programs on the East Bank campus are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000); at University of Minnesota Bookstore—West Bank (625-3000) for West Bank campus courses; and at University of Minnesota Bookstore—St. Paul for courses offered on that campus(624-9200).

Byron K. Marshall, Professor of History

Robert J. Poor, Professor of Art History

Stuart Schwartz, Professor of History

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in courses offered through Area Studies Programs. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

### East Asian Studies (EAS)

**EAS 1463 INTRODUCTION TO EAST ASIA IN MODERN TIMES.** 4 credits, §Hist 3463, tuition\*: Resident \$318; Non-resident \$922.20.

Decline of Asian empires; European and American imperialism; Asian responses; nationalism; social revolution, reintegration, modernization in China, Japan, Vietnam, Korea; retreat of European and American empires. (No prereq. Meets concurrently with Hist 3463)

Fall Qtr, Sec 1, Th, 6:20-8:50, BlegH 115, Marshall

**EAS 3013 INTRODUCTION TO EAST ASIAN ART.** 4 credits, §ArH 3013, tuition\* (includes \$5 course fee): Resident \$349; Non-resident \$1002.60.

Major themes of Far Eastern art. Arts of China and Japan. (No prereq. Meets concurrently with ArtH 3013. Limited to a combined total of 70)

Fall Qtr, ★Sec 1, Th, 6:20-8:50, JonesH 207B, Poor

(See also CSch 0163, Combining the Arts of Japan: A Haiku and Papermaking Workshop)

**EAS 3465 CHINA'S RESPONSE TO THE WEST, 1750-1911.** 4 credits, §Hist 3465, 5465, tuition\*: Resident \$344; Non-resident \$997.60.

Eighteenth-century demographic crisis; the growth of Western trade, opium wars, and peasant rebellion; early reform efforts, cultural conflicts with the West, imperialism in China, and the first phase of the Chinese revolution. (No prereq. Meets concurrently with Hist 3465, 5465)

Fall Qtr, Sec 1, T, 6:20-8:50, BlegH 120

**EAS 3467 THE NATIONALIST REVOLUTION IN CHINA, 1900 TO PRESENT.** 4 credits, §Hist 3467, §Hist 5467, tuition\*: Resident \$344; Non-resident \$997.60.

Failure of the early republic, warlordism, the new culture movement, and the development of Chinese nationalism. The rise of the Nationalist Party and intervention of the Soviet Union, Japan, and the United States. Taiwan and the People's Republic of China. (No prereq. Meets concurrently with Hist 3467)

Spring Qtr, Sec 1, Th, 6:20-8:50, BlegH 140

**EAS 3468 PEOPLE'S REPUBLIC OF CHINA: THE COMMUNIST REVOLUTION, 1900 TO PRESENT.** 4 credits, §Hist 3468, 5468, tuition\*: Resident \$344; Non-resident \$997.60.

Introduction of Marxism in China, rise of Communist Party, and development of a rural guerilla movement. The career of Mao Tse-tung and developments in People's Republic: the Great Leap, Cultural Revolution, Gang of Four. (No prereq. Meets concurrently with Hist 3468)

Winter Qtr, Sec 1, Th, 6:20-8:50, BlegH 225

**EAS 3471 20TH-CENTURY JAPAN.** 4 credits, §Hist 3471, §Hist 5471, tuition\*: Resident \$344; Non-resident \$997.60.

The development of an industrial society, parliamentary government, mass culture, and imperialism from the Meiji reforms to the late 19th century through World War II to the contemporary period. (No prereq. Meets concurrently with Hist 3471 and 5471)

Spring Qtr, Sec 1, M, 6:20-8:50, BlegH 105, Marshall

### Latin American Studies (LAS)

**LAS 3401 SURVEY OF LATIN AMERICAN HISTORY: COLONIAL PERIOD TO 1800.** 4 credits, §Hist 3401, tuition\*: Resident \$344; Non-resident \$997.60.

The pre-Hispanic and colonial period to 1800, with emphasis on social, cultural, and economic aspects. (No prereq. Meets concurrently with Hist 3401)

Fall Qtr, Sec 1, M, 6:20-8:50, BlegH 155, Schwartz

(See also REX 0507, Missionaries and the Conquest of Honduran Indians)

**LAS 3402 SURVEY OF LATIN AMERICAN HISTORY: 1800-1929.** 4 credits, §Hist 3402, tuition\*: Resident \$344; Non-resident \$997.60.

Development of new nations from independence to the emergence of dependent economies. (No prereq. Meets concurrently with Hist 3402)

Winter Qtr, Sec 1, M, 6:20-8:50, HHCtr 60

**LAS 3403 SURVEY OF LATIN AMERICAN HISTORY: 1929 TO PRESENT.** 4 credits, §Hist 3403, tuition\*: Resident \$344; Non-resident \$997.60.

Contradictions of modern societies: economic expansion, dependency, population growth and the social crisis, democratic and authoritarian politics. (No prereq. Meets concurrently with Hist 3403)

Spring Qtr, Sec 1, T, 6:20-8:50, Law 3

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Art (ArtS)

(208 Art Building: 625-8096)

### College of Liberal Arts

Textbooks for most ArtS courses are available at University of Minnesota Bookstore—West Bank (625-3000).

(See also General College courses in artistic expression; and *Art and Architecture* and photography courses in Compleat Scholar noncredit section)

Christine Baeumler, Lecturer  
 Guy Baldwin, Associate Professor  
 Karl Bethke, Professor  
 Victor Caglioti, Associate Professor  
 Thomas Cowette, Associate Professor  
 David L. Feinberg, Associate Professor  
 Curtis Hoard, Professor  
 Jerald Krepps, Associate Professor  
 Thomas Lane, Associate Professor  
 Susan Lucey, Associate Professor  
 Jeff Millikan, Lecturer  
 Malcolm Myers, Professor Emeritus  
 Mark Pharis, Associate Professor  
 Wayne Potratz, Professor  
 Herman Rowan, Professor Emeritus  
 Jeff Sandeen, Lecturer  
 Marcie Soderman-Olson, Lecturer  
 Karen Wirth, Lecturer

### A major in ArtS can be completed in the evening.

Most courses required in the major are offered in the evening each year. However, certain courses may be offered only every two or three years. It may be necessary for students seeking a B.F.A. in art to take some classes during the day in order to graduate.

Students considering a major in art should discuss plans with the coordinator of advising, 625-1848.

*Students majoring in art must take all ArtS and ArtH courses A-F. Grades of A, B, or C are required in the major courses.*

### B.A. MAJOR SEQUENCE

#### Required Preparatory Courses:

ArtS 1101, 1401, 1404, 1301 or 1302  
 12 cr from 1102, 1301 or 1302, 1510, 1520, 1530, 1540, 1602, 1701, 1811, 1812  
 ArtS 1401 should be taken before other departmental courses, or concurrently with the other required 1xxx-level studio arts courses.

#### Major Requirements

At least 28 cr in studio arts courses at 3xxx/5xxx levels  
 12 cr Art History with a minimum of 8 cr at the 3xxx/5xxx level

ArtS 3444, Senior Project, 2 cr, taken the final senior quarter

### B.F.A. MAJOR SEQUENCE

The B.F.A. is a 4-year degree program offering a high concentration of ArtS coursework. It is oriented toward professional work or admission to a Master of Fine Arts program. College of Liberal Arts art majors may apply for the B.F.A. degree after completing the five preparatory courses (see below). To apply, students must submit the B.F.A. application form (available in the Art Advising Office), a current U of M transcript, 3 faculty evaluations, and 8 to 10 35mm color slides of their artwork. Outstanding candidates will be granted B.F.A. degree status based on their academic record (minimum B grade point average in studio arts coursework) and the quality of their artwork as determined by a faculty review committee. B.F.A. candidates must maintain a B average in the major; candidacy is subject to review and dismissal. Upon acceptance, students must discuss and file major programs with the art adviser and the college office. All ArtS, ArtH, and Related Artistic Expression courses must be taken on the A-F grade system. Grades below C may not be applied to the major requirements.

*Preparatory classes to be completed before application to B.F.A.: Introduction to Studio Arts, Drawing, Color, Sculpture or Ceramics, Printmaking or Photography.*

#### Major Requirements:

1xxx level: ArtS 1101, 1301 or 1302, 1401, 1404, 1510 or 1520 or 1530 or 1540, 1701, 1811 or 1812, and 8 cr of ArtS electives.

3xxx/5xxx level:

Area concentration: 24 cr (Drawing/Painting, Sculpture, Printmaking, Photography, or Ceramics)

ArtS electives: 16 cr (may include ArtS 3970 and 5970 Directed Study, and 3980 Directed Instruction)

Required Seminar: ArtS 5400 Concepts in Contemporary Arts

Art History: 16 cr total with a minimum of 8 cr at the 3xxx/5xxx level

Related Artistic Expression: 8 cr from Group D except ArtS and ArtH

Final Quarter Exhibition: B.F.A. solo or group shows may be arranged through the Katherine E. Nash Gallery, the Art Department Gallery, Larson Gallery, or other accessible local galleries.

### MINOR SEQUENCE

#### Required Preparatory Courses: 1401

8 cr 1xxx level studio arts  
 4 cr Art History (any level)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

# Course Descriptions

## Minor Requirements:

16-25 cr 3xxx/5xxx level studio arts

**You need not be majoring in Art to register for studio arts courses.**

## RESTRICTIONS IN ART CLASSES

1. Registration in any ArtS class after the first class meeting must be accompanied by the instructor's written permission.

2. Students who do not attend the first class session may lose their place in the course (at the instructor's discretion). A student who cannot attend the first class should call the instructor in advance or call the department at 625-1848 or 625-8096 to make arrangements to hold a place in class. A student who does not make these arrangements and has to cancel the course must obtain a written verification of non-attendance (from the instructor) to be given a tuition refund. This verification must be turned in at 101 Wesbrook Hall by the end of the second week of the term.

Students must be on time for the first class meeting. If a student is more than 15 minutes late, the instructor can assign his or her place in the course to another student, and the student must cancel the class to receive a refund (see instructions in paragraph above).

Most studio courses require the student to spend a minimum of one hour per week in the Art Labs for each hour spent in class.

Because Extension funds its own classes, and since the subject matter of studio courses requires that enrollments be limited to small numbers of students, it has become necessary for Extension Classes to add a \$10 special fee to most classes in order for the classes to be held.

Some studio courses require additional fees which cover part of the cost of expendable materials, models, breakage, and special facilities. Use of a locker for the quarter is included in the course fee for sculpture and ceramics classes.

3. **ArtS Labs:** open labs have been scheduled to accommodate all 1xxx- and 3xxx-level Extension courses. These labs are staffed with teaching assistants who can answer both aesthetic and technical questions about the course as well as help students with the work in the course. Consult the department's lab schedule which accompanies the Art Student Fact Sheet for days and times. **Attendance at more than one lab is also possible. Attendance at lab is strongly encouraged to achieve a passing grade.**

4. Students who wish to audit ArtS courses must have written permission of the instructor and pay the full tuition rate and fees.

**Graphic Design/Commercial Art**—Graphic Design/Commercial Illustration courses are offered through the Department of Design in this Bulletin.

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in ArtS. **You must have a permission slip signed both by the instructor and by the Department of Art.** For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**Intermedia Arts courses** are no longer available for University of Minnesota credit after summer 1995. Intermedia Arts, as an organization separate from the University, will continue to pursue non-accredited media education. For more information about Intermedia Arts opportunities, call (612) 627-4449. The University's Department of Art will continue to offer courses in electronic and digital imaging using the Macintosh computer as a tool in the making of visual art. For information on Department of Art courses, call (612) 625-8096 or 625-1848.

## ArtS 1401 INTRODUCTION TO STUDIO ART.

See page 79.

**ArtS 1101 BASIC DRAWING.** 4 credits, tuition\* (includes \$10 special fee and \$20 course fee): Resident \$348; Non-resident \$952.20.

An introduction to basic drawing elements; exploration of contemporary and traditional methods, various drawing media, work from nature and still life. (No prereq. See **Restrictions, page 78.** Limited to 20)

Fall Qtr, ★Sec 1, M, 6-10, ArtB 140, Caglioti

Fall Qtr, ★Sec 2, M, 6-10, ArtB 150

Fall Qtr, ★Sec 3, T, 6-10, ArtB 150

Fall Qtr, ★Sec 4, W, 6-10, ArtB 150

Fall Qtr, ★Sec 5, Th, 6-10, ArtB 150

Fall Qtr, ★Sec 6, Sa, 8:30 a.m.-12:30, ArtB 160

Winter Qtr, ★Sec 7, M, 6-10, ArtB 140, Caglioti

Winter Qtr, ★Sec 8, T, 6-10, ArtB 150

Winter Qtr, ★Sec 9, W, 6-10, ArtB 140, Caglioti

Winter Qtr, ★Sec 10, Th, 6-10, ArtB 150

Winter Qtr, ★Sec 11, Sa, 8:30 a.m.-12:30, ArtB 160

Spring Qtr, ★Sec 12, M, 6-10, ArtB 160

Spring Qtr, ★Sec 13, T, 6-10, ArtB 150

Spring Qtr, ★Sec 14, W, 6-10, ArtB 140, Caglioti

Spring Qtr, ★Sec 15, Th, 6-10, ArtB 150

Spring Qtr, ★Sec 16, Sa, 8:30 a.m.-12:30, ArtB

160, Rowan

Spring Qtr, ★Sec 17, Sa, 8:30 a.m.-12:30, ArtB

140, Cowette

\* Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**ArtS 1102 DRAWING.** 4 credits, tuition\* (includes \$5 special fee and \$20 course fee): Resident \$343; Non-resident \$947.20.

Work from life and nature. Introduction to pictorial structure. (Prereq 1101. See **Restrictions, page 78.** Limited to 20)

Fall Qtr, ★Sec 1, Sa, 8:30 a.m.-12:30, ArtB 140, Cowette

Winter Qtr, ★Sec 2, W, 6-10, ArtB 150

Winter Qtr, ★Sec 3, Sa, 8:30 a.m.-12:30, ArtB 140, Cowette

Spring Qtr, ★Sec 4, M, 6-10, ArtB 150

Spring Qtr, ★Sec 5, T, 6-10, ArtB 140, Rowan

(See also CSch 0140, Creative Drawing)

**ArtS 1301 BASIC SCULPTURE.** 4 credits, tuition\* (includes \$10 special fee and \$65 course fee): Resident \$393; Non-resident \$997.20.

Beginning course in metal construction; intensive study of structure with emphasis on form and space. Construction in metal. (No prereq. See **Restrictions, page 78.** Limited to 20)

Fall Qtr, ★Sec 1, M, 6-10, ArtB 65, Lucey

Winter Qtr, ★Sec 2, M, 6-10, ArtB 65, Lucey

Spring Qtr, ★Sec 3, T, 6-10, ArtB 65, Baldwin

**ArtS 1302 BASIC SCULPTURE.** 4 credits, tuition\* (includes \$10 special fee and \$65 course fee): Resident \$393; Non-resident \$997.20.

Natural form is studied. Imaginative approaches are encouraged. Construction in clay, plaster, wood. Mold-making and casting. (No prereq. See **Restrictions, page 78.** Limited to 20)

Fall Qtr, ★Sec 1, T, 6-10, ArtB 50, Baldwin

Winter Qtr, ★Sec 2, T, 6-10, ArtB 50, Baldwin

Spring Qtr, ★Sec 3, W, 6-10, ArtB 50, Potratz

**ArtS 1401 INTRODUCTION TO STUDIO ART.** 4 credits, tuition\* (includes \$10 special fee and \$15 course fee): Resident \$343; Non-resident \$947.20.

This lecture course 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. Slide lectures, field trips, 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. See **Restrictions, page 78.**)

Fall Qtr, Sec 1, Th, 6-10, BlegH 10, Baeumler

Winter Qtr, Sec 2, Th, 6-10, BlegH 10, Baeumler

Spring Qtr, Sec 3, Th, 6-10, BlegH 10, Baeumler

**ArtS 1403 PAPERMAKING: PULP TO PLASTIC EXPRESSION.** 4 credits, tuition\* (includes \$10 special fee and \$20 course fee): Resident \$348; Non-resident \$952.20.

An introduction to the art of handmade paper explored through historical and contemporary approaches. Emphasis on Western approaches; attention to processing indigenous fibers, manipulation of pulp, pulp painting, laminations and archival concerns. Exploration of the versatility of handmade paper as a means of personal vision and aesthetic. (No prereq. Meets concurrently with 3430, 5430. See **Restrictions, page 78.** Limited to a combined total of 18)

Spring Qtr, ★Sec 1, M, 6-10, ArtB 35, Krepps

(See also CSch 0163, Combining the Arts of Japan: A Haiku and Papermaking Workshop)

**ArtS 1404 COLOR.** 4 credits, tuition\* (includes \$10 special fee and \$20 course fee): Resident \$348; Non-resident \$952.20.

Introduction to color and pictorial organization. This will provide students with intensive investigation of color and its visual implications. (Prereq 1101. See **Restrictions, page 78.** Limited to 20)

Fall Qtr, ★Sec 1, Th, 6-10, ArtB 160, Bethke

Fall Qtr, ★Sec 2, W, 6-10, ArtB 141, Feinberg

Winter Qtr, ★Sec 3, W, 6-10, ArtB 141, Feinberg

Winter Qtr, ★Sec 4, Th, 6-10, ArtB 160, Bethke

Spring Qtr, ★Sec 5, Th, 6-10, ArtB 160

Spring Qtr, ★Sec 6, Sa, 8:30 a.m.-12:30, ArtB 141

**ArtS 1510 PRINTMAKING: INTAGLIO.** 4 credits each quarter (maximum 8 cr), tuition\* (includes \$10 special fee and \$50 course fee): Resident \$378; Non-resident \$982.20.

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. See **Restrictions, page 78.** Limited to a combined total of 20)

Winter Qtr, ★Sec 1, T, 6-10, ArtB 170, Myers

**ArtS 1520 PRINTMAKING: LITHOGRAPHY.** 4 credits each quarter (maximum 8 cr), tuition\* (includes \$10 special fee and \$50 course fee): Resident \$378; Non-resident \$982.20.

An introduction to printing from stones and plates. The aesthetics and creative potentials of the multiple. Emphasis is directed to the basic approaches to image-making, processing, printing and presentation of prints. (No prereq. Meets concurrently with 3520, 5520. See **Restrictions, page 78.** Limited to a combined total of 20)

Fall Qtr, ★Sec 1, M, 6-10, ArtB 170, Krepps

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**ArtS 1540 PRINTMAKING: SCREEN.** 4 credits each quarter (maximum 8 cr), tuition\* (includes \$10 special fee and \$50 course fee): Resident \$378; Non-resident \$982.20.

Traditional and contemporary screen printing media. Direct and indirect block-out stencil, cut stencil, and photo stencil techniques and their aesthetic applications. (No prereq. Meets concurrently with 3540, 5540. Limited to a combined total of 20)  
Spring Qtr, ★Sec 1, Th, 6-10, ArtB 170, Bethke

**ArtS 1602 ELECTRONIC ART.** 4 credits, tuition\* (includes \$5 special fee and \$170 course fee): Resident \$493; Non-resident \$1097.20.

A combination lecture and studio course focusing on the creative use of the Amiga. This computer art course will introduce students to the principles and use of computers and various software packages from which they generate images of their own design to be recorded and displayed on videotape. (No prereq. Limited to 15)

Fall Qtr, ★Sec 1, W, 6-10, AndH 250, Sandeen  
Fall Qtr, ★Sec 2, Th, 6-10, AndH 250, Sandeen  
Winter Qtr, ★Sec 3, Th, 6-10, AndH 250, Sandeen  
Spring Qtr, ★Sec 4, W, 6-10, AndH 250, Sandeen  
Spring Qtr, ★Sec 5, Th, 6-10, AndH 250, Sandeen

**ArtS 1701 INTRODUCTION TO PHOTO MEDIUM.** 4 credits, tuition\* (includes \$50 special fee): Resident \$368; Non-resident \$972.20.

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. Any 35mm camera with adjustable F stops and shutter speeds is acceptable. If you wish to use a camera other than 35mm and are uncertain whether it will be acceptable, you may check with the Studio Arts department, 625-9532. **Additional materials for the course may cost \$75-\$125.** (No prereq. See **Restrictions, page 78.** Limited to 20).

Fall Qtr, ★Sec 1, M, 6-10, ArtB 120  
Fall Qtr, ★Sec 2, T, 1-4:45, MacP Bsmt, Millikan  
Fall Qtr, ★Sec 3, T, 6-10, ArtB 120  
Winter Qtr, ★Sec 4, M, 6-10, ArtB 120  
Winter Qtr, ★Sec 5, M, 1-4:45, MacP Bsmt, Millikan  
Winter Qtr, ★Sec 6, T, 1-4:45, MacP Bsmt, Millikan  
Winter Qtr, ★Sec 7, T, 6-10, ArtB 120  
Spring Qtr, ★Sec 8, M, 6-10, ArtB 120  
Spring Qtr, ★Sec 9, T, 1-4:45, MacP Bsmt, Millikan  
Spring Qtr, ★Sec 10, T, 6-10, ArtB 120

(See also Compleat Scholar photography courses, page 415)

**ArtS 1811 CERAMICS.** 4 credits, tuition\* (includes \$10 special fee and \$65 course fee): Resident \$393; Non-resident \$997.20.

Introduction to handbuilding techniques in clay for individual creative expression. (No prereq. See **Restrictions, page 78.** Limited to 20)

Fall Qtr, ★Sec 1, M, 6-10, ArtB 10, Hoard  
Fall Qtr, ★Sec 2, T, 6-10, ArtB 10, Lane  
Winter Qtr, ★Sec 3, W, 6-10, ArtB 10, Pharis  
Spring Qtr, ★Sec 4, M, 6-10, ArtB 10, Hoard

**ArtS 1812 CERAMICS.** 4 credits, tuition\* plus \$10 special fee and \$65 course fee. Total: Resident \$393; Non-resident \$997.20.

Introduction to wheel throwing techniques. (No prereq. See **Restrictions, page 78.** Limited to 20)

Fall Qtr, ★Sec 1, W, 6-10, ArtB 10, Pharis  
Winter Qtr, ★Sec 2, M, 6-10, ArtB 10, Hoard  
Spring Qtr, ★Sec 3, T, 6-10, ArtB 10, Lane  
Spring Qtr, ★Sec 4, W, 6-10, ArtB 10, Pharis

**ArtS 3105 PAINTING.** 4 credits, tuition\* (includes \$10 special fee and \$15 course fee): Resident \$369; Non-resident \$1022.60.

Introduction to studio work in painting explores the fundamentals of visual art making via the paint media. Emphasis is on the visual language: volume, texture, color, line, space, light, compositions. Proper attention will focus on concepts and technique and philosophies of painting. (Prereq 1401, 1101, 1102, 1404 or #. Limited to 20)

Fall Qtr, ★Sec 1, Sa, 8:30 a.m.-12:30, ArtB 161, Feinberg  
Winter Qtr, ★Sec 2, Sa, 8:30 a.m.-12:30, ArtB 161, Rowan  
Spring Qtr, ★Sec 3, W, 6-10, ArtB 151, Feinberg  
(See also CSch 0144, The Other End of the Paintbrush: Painting in Oils and Acrylics)

**ArtS 3110 DRAWING.** 4 credits each quarter (maximum 12 cr), tuition\* (includes \$10 special fee and \$15 course fee): Resident \$369; Non-resident \$1022.60.

Elements of drawing from the nude model, still life, and nature. (Prereq 1401, 1101, 1102. See **Restrictions, page 78.** Meets concurrently with 5110. Limited to a combined total of 20)

Fall Qtr, ★Sec 1 T, 6-10, ArtB 141, Roode  
Winter Qtr, ★Sec 2 T, 6-10, ArtB 141, Roode  
Spring Qtr, ★Sec 3 T, 6-10, ArtB 141, Roode

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



**Arts 3120 PAINTING.** 4 credits each quarter (maximum 12 cr), tuition\* (includes \$10 special fee and \$15 course fee): Resident \$369; Non-resident \$1022.60.

Continuation of media development and individual problems. (Prereq 1101, 1102, 1404, 3105, 3110, 1401 or #. See **Restrictions, page 78.** Meets concurrently with 5120. Limited to a combined total of 20)

Fall Qtr, ★Sec 1, W, 6-10, ArtB 151, Caglioti  
Winter Qtr, ★Sec 2, Sa, 8:30 a.m.-12:30, ArtB 151, Feinberg

Spring Qtr, ★Sec 3, M, 6-10, ArtB 151, Caglioti

**Arts 3130 WATERCOLOR.** 4 credits each quarter (maximum 12 cr), tuition\* (includes \$10 special fee and \$15 course fee): Resident \$369; Non-resident \$1022.60.

Introduction to transparent watercolor, gouache, casein, and tempera. Figure, still life, landscape, and individual directions. (Prereq 1101, 1102, 1404, 1401 or #. Meets concurrently with 5130. See **Restrictions, page 78.** Limited to a combined total of 20)

Fall Qtr, ★Sec 1, M, 6-10, ArtB 141, Myers  
Winter Qtr, ★Sec 2, M, 6-10, ArtB 141, Myers  
Spring Qtr, ★Sec 3, M, 6-10, ArtB 141, Myers

(See also CSch 0146, Painting in Watercolor)

**Arts 3131 NATURE OF ABSTRACTION.** 4 credits each quarter, \$5131, tuition\* (includes \$10 special fee and \$15 course fee): Resident \$369; Non-resident \$1022.60.

Two-dimensional projects in various media in which representational images from nature are transposed toward abstract syntheses through specific attention to visual elements. (Prereq 1102, 1401, 1404. See **Restrictions, page 78.** Limited to 18)

Fall Qtr, ★Sec 1, Sa, 8:30 a.m.-12:30, ArtB 151, Rowan

**Arts 3303 SCULPTURE: CAST METAL.** 4 credits, tuition\* (includes \$10 special fee and \$65 course fee): Resident \$419; Non-resident \$1072.60.

Lost wax and sand casting in bronze, aluminum, iron. (Prereq 1301, 1302, 1401. Meets concurrently with 5330. See **Restrictions, page 78.** Limited to a combined total of 20)

Fall Qtr, ★Sec 1, T, 6-10, ArtB 185, Potratz  
Winter Qtr, ★Sec 2, T, 6-10, ArtB 185

**Arts 3306 PERFORMANCE ART.** 4 credits, tuition\* (includes \$10 special fee and \$50 course fee): Resident \$404; Non-resident \$1057.60.

Development of individual performance artworks and research pioneers of this art form. (Prereq 1401. Meets concurrently with 5360. Limited to a combined total of 20)

Spring Qtr, ★Sec 1, M, 6-10, ArtB 65, Lucey

**Arts 3420 WORKSHOP: ARTISTS' BOOKS: From Structure to Content.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Interdisciplinary exploration of art in the book form, ranging from one-of-a-kind books to multiples and sculptural works. Covers the visual language of page design, the technical aspects of book structures, and extends into making books as art objects in a variety of mediums. Concepts include image/text relationships, rhythm and sequence, and narrative structure. **Note:** *A materials fee will be collected by the instructor.* (Prereq 1xxx-level ArtS course. Meets concurrently with 5420 sec 1. Limited to a combined total of 10)

Fall Qtr, ★Sec 1, T, 6-10, ArtB 160, Wirth

**Arts 3420 WOMEN'S IMAGES AND IMAGES OF WOMEN: PREHISTORY TO MODERNISM.** 4 credits, tuition\* (includes \$15 course fee): Resident \$359; Non-resident \$1012.60.

Explores women's place in Western art from several perspectives: women as artists and the imagery they have created, and women as the subject of imagery and the attitudes those images convey. The course presents the works of recognized women artists beginning with the medieval era through the Modern period. Artists presented will include Artemisia Gentileschi and Elisabeth Vigee-Le Brun, as well as more recent women artists such as Mary Cassatt and Paula Modersohn-Becker. The class also examines and discusses how women have been portrayed as the subject of imagery, beginning with works from prehistory such as the Venus of Willendorf, proceeding through history to the 20th century. There will be a special emphasis on attitudes expressed in the work of 19th-century artists, and will include a re-examination of famous works such as Courbet's nudes, Manet's *Luncheon on the Grass*, and Ingres's harem scenes. (No prereq. Meets concurrently with 5420 sec 2. Limited to a combined total of 40)

Winter Qtr, ★Sec 2, M, 6-10, JonesH 207B, Soderman-Olson

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Arts 3420 WOMEN'S IMAGES AND IMAGES OF WOMEN: MODERNISM TO THE PRESENT.** 4 credits, tuition\* (includes \$15 course fee): Resident \$359; Non-resident \$1012.60.

Explores women's place in Western art from the early 20th century to the present through several perspectives: women as artists and the imagery they have created, and women as the subject of imagery and the attitudes those images convey. The course presents women artists' work from modernism to the feminist era of the late 1960s and early 1970s (such as Judy Chicago and Eva Hesse) to the work of current artists such as Jenny Holzer and Louise Bourgeois. Students explore contemporary issues related to art work by women including the engagement of personal identity and experiences, the questioning of economic, cultural, and social attitudes, and the use of alternative media and techniques. (No prereq. Meets concurrently with 5420 sec 3. Limited to a combined total of 40)

Spring Qtr, ★Sec 3, M, 6-10, JonesH 207B,  
Soderman-Olson

(See also CSch 0103, Art After Modernism)

**Arts 3420 WORKSHOP: KILN BUILDING.** 4 credits, tuition\* (includes \$10 special fee and \$15 course fee): Resident \$369; Non-resident \$1022.60.

Introduction to the design, construction, and operation of kilns for the studio ceramist. (Prereq 1811 or 1812 and #. Meets concurrently with 5420 sec 4. Limited to a combined total of 20)

Spring Qtr, ★Sec 4, Th, 6-10, ArtB 10, Hoard

**Arts 3420 WORKSHOP: PAINTED SCULPTURE.** 4 credits, tuition\* (includes \$10 special fee and \$15 course fee): Resident \$369; Non-resident \$1022.60.

Concepts of the interdependency of 2- and 3-dimensional form combined with a work of art. Camouflage, illusion, and the sensation of deep space will be presented in various assignments. (Prereq one 1xxx-level Studio Arts course. Meets concurrently with 5420 sec 5. Limited to a combined total of 20)

Spring Qtr, ★Sec 5, Sa, 8:30 a.m.-12:30, ArtB  
151, Feinberg

**Arts 3430 PAPER: PULP TO PLASTIC EXPRESSION.** 4 credits (maximum 12 cr), tuition\* (includes \$10 special fee and \$45 course fee): Resident \$399; Non-resident \$1052.60.

Creative and traditional approaches to papermaking. Course will focus on the role of paper with regard to the total expression of an art work, and the

relationship of materials and preparation that lends uniqueness to handmade papers. (Prereq 1401, 1403. Meets concurrently with 1403, 5430. See **Restrictions, page 78.** Limited to a combined total of 18)  
Spring Qtr, ★Sec 1, M, 6-10, ArtB 35, Krepps

**Arts 3510 PRINTMAKING: INTAGLIO.** 4 credits each quarter (maximum 12 cr), tuition\* (includes \$10 special fee and \$55 course fee): Resident \$409; Non-resident \$1062.60.

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 1401, 1510 or #. Meets concurrently with 1510, 5510. See **Restrictions, page 78.** Limited to a combined total of 20)

Winter Qtr, ★Sec 1, T, 6-10, ArtB 170, Myers

**Arts 3520 PRINTMAKING: INTERMEDIATE LITHOGRAPHY.** 4 credits each quarter (maximum 12 cr), tuition\* (includes \$10 special fee and \$55 course fee): Resident \$409; Non-resident \$1062.60.

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 1401, 1520 or #. Meets concurrently with 1520, 5520. See **Restrictions, page 78** Limited to a combined total of 20)

Fall Qtr, ★Sec 1, M, 6-10, ArtB 170, Krepps

**Arts 3540 PRINTMAKING: SCREEN.** 4 credits each quarter (maximum 12 cr), tuition\* each quarter (includes \$10 special fee and \$55 course fee): Resident \$409; Non-resident \$1062.60.

Further exploration of screen printing techniques, emphasis on color and image development. (Prereq 1401, 1540 or #. Meets concurrently with 1540 and 5540. Limited to a combined total of 20)

Spring Qtr, ★Sec 1, Th, 6-10, ArtB 170, Bethke

**Arts 3602 ART AND COMPUTERS II.** 4 credits, tuition\* (includes \$5 special fee and \$170 course fee): Resident \$519; Non-resident \$1172.60.

Continuation and development of methods and concepts introduced in ArtS 1602. Using the Amiga. Techniques will be refined with an emphasis on producing a final project with computer graphics and animation. (Prereq 1602. Limited to 15)

Winter Qtr, ★Sec 1, W, 6-10, AndH 250,  
Sandeen

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**ArtS 3710 INTERMEDIATE PHOTOGRAPHY.** 4 credits each quarter (maximum 12 cr), tuition\* (includes \$50 special fee): Resident \$394; Non-resident \$1047.60.

Continued work in photographic controls and processes. Introduction to related photosensitive media. Emphasis on creative process with attention to individual interests and requirements. *Emphasis Fall Qtr:* The fine print. *Emphasis Winter Qtr:* The extended image. *Emphasis Spring Qtr:* Contemporary topics in photography. **Additional materials for the course may cost \$75- \$125.** (Prereq 1401, 1701 or #. See **Restrictions, page 78.** Limited to 20)

Fall Qtr, ★Sec 1, W, 6-10, ArtB 120

Fall Qtr, ★Sec 2, W, 1-4:45, MacP Bsmt, Millikan

Winter Qtr, ★Sec 3, W, 1-4:45, MacP Bsmt, Millikan

Winter Qtr, ★Sec 4, W, 6-10, ArtB 120

Spring Qtr, ★Sec 5, W, 6-10, ArtB 120 (Concurrent with 5710 and limited to a combined total of 20)

(See also Compleat Scholar photography courses, page 415)

**ArtS 3810 CERAMIC DESIGN.** 4 credits each quarter (maximum 12 cr), tuition\* (includes \$10 special fee and \$75 course fee): Resident \$429; Non-resident \$1082.60.

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 1401, 1811, 1812 or #. See **Restrictions, page 78.** Limited to 20)

Winter Qtr, ★Sec 1, T, 6-10, ArtB 10, Lane

**ArtS 5110 ADVANCED DRAWING.** 4 credits each quarter (maximum 16 cr), tuition\* (includes \$10 special fee and \$15 course fee): Resident \$369; Non-resident \$1022.60; Resident Graduate credit \$497; Non-resident Graduate credit \$1063.40; Resident Graduate School credit \$887; Non-resident Graduate School credit \$1921.40.

Drawing in all mediums from life and from imagination; history of drawing. (Prereq 12 cr of 3110 or #. Meets concurrently with 3110. See **Restrictions, page 78.** Qualified students may register for graduate credit at the University of Minnesota. Limited to a combined total of 20)

Fall Qtr, ★Sec 1, T, 6-10, ArtB 141, Roode

Winter Qtr, ★Sec 2, T, 6-10, Art 141, Roode

Spring Qtr, ★Sec 3, T, 6-10, ArtB 141, Roode

**ArtS 5120 PROBLEMS IN PAINTING.** 4 credits each quarter (maximum 16 cr), tuition\* (includes \$10 special fee and \$15 course fee): Resident \$369; Non-resident \$1022.60; Resident Graduate credit \$497; Non-resident Graduate credit \$1063.40; Resident Graduate School credit \$887; Non-resident Graduate School credit \$1921.40.

An advanced course in acrylic and oil painting with emphasis on individual directions as they reflect current and traditional trends in art. (Prereq 12 cr of 3120 or #. See **Restrictions, page 78.** Meets concurrently with 3120. Contact the Art Department about graduate credit. Limited to a combined total of 20)

Fall Qtr, ★Sec 1, W, 6-10, ArtB 151, Caglioti

Winter Qtr, ★Sec 2, Sa, 8:30 a.m.-12:30, ArtB 151, Feinberg

Spring Qtr, ★Sec 3, M, 6-10, ArtB 151, Caglioti

**ArtS 5130 WATERCOLOR.** 4 credits each quarter (maximum 16 cr), tuition\* (includes \$10 special fee and \$15 course fee): Resident \$369; Non-resident \$1022.60.

Advanced watercolor techniques, aesthetic direction. Continued development of concepts and individual direction. (Prereq 12 cr of 3130 or #. Meets concurrently with 3130. See **Restrictions, page 78.** May not be taken for graduate credit. Limited to a combined total of 20)

Fall Qtr, ★Sec 1, M, 6-10, ArtB 141, Myers

Winter Qtr, ★Sec 2, M, 6-10, ArtB 141, Myers

Spring Qtr, ★Sec 3, M, 6-10, ArtB 141, Myers

(See also CSch 0147, Watercolor: In Search of a Personal Style)

**ArtS 5330 SCULPTURE: CAST METAL.** 4 credits each quarter (maximum 16 cr), tuition\* (includes \$10 special fee and \$65 course fee): Resident \$419; Non-resident \$1072.60; Resident Graduate credit \$547; Non-resident Graduate credit \$1113.40; Resident Graduate School credit \$937; Non-resident Graduate School credit \$1971.40.

See description for 3303. (Prereq 3303. Meets concurrently with 3303. See **Restrictions, page 78.** Qualified students may register in Sec 1 only for graduate credit at the University of Minnesota; Sec 2 may not be taken for graduate credit at the University of Minnesota. Limited to a combined total of 20)

Fall Qtr, ★Sec 1, T, 6-10, ArtB 185, Potratz

Winter Qtr, ★Sec 2, T, 6-10, ArtB 185

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**ArtS 5360 PERFORMANCE ART.** 4 credits (maximum 16 cr), tuition\* plus \$10 special fee and \$50 course fee. Total: Resident \$404; Non-resident \$1057.60; Resident Graduate credit \$532; Non-resident Graduate credit \$1098.40; Resident Graduate School credit \$922; Non-resident Graduate School credit \$1956.40.

See course description for ArtS 3306. (Prereq 3306. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3306. Limited to a combined total of 20)

Spring Qtr, ★Sec 1, M, 6-10, ArtB 65, Lucey

**ArtS 5420 WORKSHOP: ARTISTS' BOOKS: From Structure to Content.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit 862; Non-resident Graduate School credit \$1896.40.

See ArtS 3420 sec 1 for description. **Note:** *A materials fee will be collected by the instructor.* (Prereq 1xxx-level ArtS course. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3420 sec 1. Limited to a combined total of 10)

Fall Qtr, ★Sec 1, T, 6-10, ArtB 160, Wirth

**ArtS 5420 WOMEN'S IMAGES AND IMAGES OF WOMEN: PREHISTORY TO MODERNISM.** 4 credits, tuition\* (includes \$35 special fee and \$15 course fee): Resident \$394; Non-resident \$1047.60; Resident Graduate credit \$522; Non-resident Graduate credit \$1088.40; Resident Graduate School credit \$912; Non-resident Graduate School credit \$1946.40.

See course description for 3420 sec 2. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3420 sec 2. Limited to a combined total of 40)

Winter Qtr, ★Sec 2, M, 6-10, JonesH 207B, Soderman-Olson

**ArtS 5420 WOMEN'S IMAGES AND IMAGES OF WOMEN: MODERNISM TO THE PRESENT.** 4 credits, tuition\* (includes \$15 course fee): Resident \$359; Non-resident \$1012.60; Resident Graduate credit \$487; Non-resident Graduate credit \$1053.40; Resident Graduate School credit \$877; Non-resident Graduate School credit \$1911.40.

See course description for 3420 sec 3. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3420 sec 3. Limited to a combined total of 40)

Spring Qtr, ★Sec 3, M, 6-10, JonesH 207B, Soderman-Olson

**ArtS 5420 WORKSHOP: KILN BUILDING.** 4 credits, tuition\* (includes \$10 special fee and \$15 course fee): Resident \$369; Non-resident \$1022.60; Resident Graduate credit \$497; Non-resident Graduate credit \$1063.40; Resident Graduate School credit \$887; Non-resident Graduate School credit \$1921.40.

See course description for ArtS 3420 sec 4. (Prereq 1811 or 1812 and #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3420 sec 4. Limited to a combined total of 20)

Spring Qtr, ★Sec 4, Th, 6-10, ArtB 10, Hoard

**ArtS 5420 WORKSHOP: PAINTED SCULPTURE.** 4 credits, tuition\* (includes \$10 special fee and \$15 course fee): Resident \$369; Non-resident \$1022.60; Resident Graduate credit \$497; Non-resident Graduate credit \$1063.40; Resident Graduate School credit \$887; Non-resident Graduate School credit \$1921.40.

See course description for ArtS 3420 sec 5. (Prereq one 1xxx-level Studio Arts course. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3420 sec 5. Limited to a combined total of 20)

Spring Qtr, ★Sec 5, Sa, 8:30 a.m.-12:30, ArtB 151, Feinberg

**ArtS 5430 PAPER: PULP TO PLASTIC EXPRESSION.** 4 credits each quarter (maximum 16 cr), tuition\* (includes \$10 special fee and \$45 course fee): Resident \$399; Non-resident \$1052.60; Resident Graduate credit \$527; Non-resident Graduate credit \$1093.40; Resident Graduate School credit \$917; Non-resident Graduate School credit \$1951.40.

See course description for ArtS 3430. (Prereq 12 cr of 3430 or #. Meets concurrently with 1403, 3430. See **Restrictions, page 78.** Qualified students may register for graduate credit at the University of Minnesota. Limited to a combined total of 18)

Spring Qtr, ★Sec 1, M, 6-10, ArtB 35, Krepps

**ArtS 5510 PRINTMAKING: ADVANCED INTAGLIO.** 4 credits each quarter (maximum 16 cr), tuition\* (includes \$10 special fee and \$55 course fee): Resident \$409; Non-resident \$1062.60.

An advanced course in etching, aquatint, meHatint, 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. See **Restrictions, page 78.** May not be taken for graduate credit. Limited to a combined total of 20)

Winter Qtr, ★Sec 2, T, 6-10, ArtB 170, Myers

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**ArtS 5520 PRINTMAKING: ADVANCED LITHOGRAPHY.** 4 credits each quarter (maximum 16 cr), tuition\* (includes \$10 special fee and \$55 course fee): Resident \$409; Non-resident \$1062.60; Resident Graduate credit \$537; Non-resident Graduate credit \$1103.40; Resident Graduate School credit \$927; Non-resident Graduate School credit \$1961.40.

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 3520 or #. Meets concurrently with 1520, 3520. See **Restrictions, page 78.** Qualified students may register for graduate credit at the University of Minnesota. Limited to a combined total of 20)

Fall Qtr, ★Sec 1, M, 6-10, ArtB 170, Krepps

**ArtS 5540 PRINTMAKING: SCREEN.** 4 credits each quarter (maximum 16 cr), tuition\* (includes \$10 special fee and \$55 course fee): Resident \$409; Non-resident \$1062.60; Resident Graduate credit \$537; Non-resident Graduate credit \$1103.40; Resident Graduate School credit \$927; Non-resident Graduate School credit \$1961.40.

Screen processes and combined techniques. (Prereq 12 cr of 3540 or #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 1540, 3540. Limited to a combined total of 20)

Spring Qtr, ★Sec 1, Th, 6-10, ArtB 170, Bethke

**ArtS 5710 PHOTOGRAPHY.** 4 credits each quarter (maximum 16 cr), tuition\* (includes \$10 special fee and \$40 course fee): Resident \$394; Non-resident \$1047.60.

Individual work in photographic controls, processes; related photosensitive media. **Additional materials for the course may cost \$75-\$125.** (Prereq 12 cr of 3710 or #. See **Restrictions, page 78.** May not be taken for graduate credit. Meets concurrently with 3710 sec 4. Limited to a combined total of 20)

Spring Qtr, ★Sec 1, W, 6-10, ArtB 120

(See also Compleat Scholar photography courses, page 415)

## Art Education

See Curriculum and Instruction (CI)

## Art History (ArtH)

(107 Jones Hall: 624-4500)

### College of Liberal Arts

Textbooks for most ArtH courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

(See also Architecture; Classical and Near Eastern Studies; General College; and *Arts and Architecture* and *Music, Theatre, and Photography* in Compleat Scholar noncredit section)

Frederick M. Asher, Professor

Frederick A. Cooper, Professor of Classical and Near Eastern Studies

Helen Griebel, Lecturer

Bruce Jenkins, Adjunct Associate Professor

Sheila McNally, Professor

Marion Nelson, Professor Emeritus

Robert Poor, Professor

Leon Satkowski, Associate Professor of Architecture

Robert Silberman, Associate Professor

Katherine Solomonson, Assistant Professor of Architecture

John W. Steyaert, Associate Professor

Michael W. Stoughton, Associate Professor

Gabriel Weisberg, Professor

**A major in Art History can be completed in the evening.**

Those courses required in the major are usually offered each year. Students interested in completing an Art History major or minor through Extension Classes should discuss plans with the director of undergraduate studies (624-0847).

### B.A. Major Sequence

*Required Preparatory Courses*

4 cr art practice (consult undergraduate studies director); 6 qtrs or equiv in a second language

*Major Requirements*

37 credits as follows:

Four of the following specifically designated courses: 3008, 3009, 3011, 3012, 3005, 3013, 3014, 3015

Five additional Art History courses of which at least two must be at the 5000 level. ArtH 3971, Major Project Course; the major project must be selected in consultation with the Director of Undergraduate Studies. **All courses must be taken A-F.**

(Consult ArtH department regarding major project.)

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

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Continuing Education for Women (CEW) sections available in the following courses:** Arth 3142, 5769

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Art History. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**Arth 1002 INTRODUCTION TO THE HISTORY OF ART.** 4 credits, tuition\* (includes \$5 course fee): Resident \$323; Non-resident \$927.20.

History of art, examined through selected monuments from the major periods of art from Paleolithic to modern times, covering Western and other cultures. (No prereq)

Winter Qtr, Sec 1, W, 6:20-8:50, AndH 310, Cooper

Spring Qtr, Sec 2, W, 6:20-8:50, AndH 310, Cooper

**Arth 1921 INTRODUCTION TO FILM STUDY.** 4 credits, §CSCL 1921, tuition\* (includes \$20 course fee): Resident \$338; Non-resident \$942.20.

Fundamentals of film language and major theories of film, presented through detailed analysis of several films. (No prereq)

Spring Qtr, Sec 1, M, 6-9, AndH 310, Jenkins

**Arth 3008 HISTORY OF ANCIENT ART.** 4 credits, §Clas 3008, tuition\* (includes \$5 course fee): Resident \$349; Non-resident \$1002.60.

Architecture, sculpture, and painting of selected early cultures; stress on influences contributing to the development of Western art. (No prereq. Meets concurrently with Clas 3008)

Fall Qtr, Sec 1, W, 6:20-8:50, FolH 306, Cooper

**Arth 3009 HISTORY OF MEDIEVAL ART.** 4 credits, tuition\* (includes \$5 course fee): Resident \$349; Non-resident \$1002.60.

Medieval architecture, painting, and sculpture from early Christian through Gothic periods. (No prereq. Meets concurrently with MeSt 3610 sec 1)

Fall Qtr, Sec 1, M, 4-6:30, FolH 306, Steyaert

**Arth 3011 HISTORY OF RENAISSANCE AND BAROQUE ART.** 4 credits, tuition\* (includes \$5 course fee): Resident \$349; Non-resident \$1002.60.

Major monuments in architecture, sculpture, and painting from the early 14th century through the baroque period. (No prereq)

Spring Qtr, Sec 1, Th, 6:20-8:50, Mpls Institute of Arts, 2400 S. 3 Ave, Stoughton

**Arth 3012 HISTORY OF 19TH- AND 20TH-CENTURY ART.** 4 credits, tuition\* (includes \$5 course fee): Resident \$349; Non-resident \$1002.60.

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

Winter Qtr, Sec 1, W, 4:30-7, FolH 306, Weisberg

(See also CSch 0197, Through an Artist's Eye: Taking Some of the Mystery Out of 20th-Century Art)

**Arth 3013 INTRODUCTION TO EAST ASIAN ART.** 4 credits, §EAS 3013, tuition\* (includes \$5 course fee): Resident \$349; Non-resident \$1002.60.

Major themes of Far Eastern art. The arts of China and Japan (not all-inclusive). (No prereq. Meets concurrently with EAS 3013. Limited to a combined total of 70)

Fall Qtr, ★Sec 1, Th, 6:20-8:50, JonesH 207B, Poor

**Arth 3014 ART OF INDIA.** 4 credits, tuition\* (includes \$5 course fee): Resident \$349; Non-resident \$1002.60.

Indian sculpture and architecture from the prehistoric Indus Valley civilization through the major historical periods. Hindu and Buddhist art from 300 B.C. to A.D. 1200. (No prereq)

Winter Qtr, Sec 1, T, 6:20-8:50, JonesH 207B, Asher

**Arth 3142 ART OF EGYPT.** 4 credits, §Clas 3142, tuition\* (includes \$5 course fee): Resident \$349; Non-resident \$1002.60.

The arts and architecture of Egypt from Prehistoric times to the emergence of modern Egypt, with stress on the elements of continuity and of change that have shaped Egyptian culture. (No prereq. Meets concurrently with Clas 3142)

Spring Qtr, Sec 1, W, 1:30-4, Mpls Institute of Arts, Auditorium, 2400 S. 3 Ave, McNally.

*Offered through Continuing Education for Women*

**Arth 3303 BAROQUE AND ROCOCO PAINTING IN FRANCE.** 4 credits, §5303, tuition\* (includes \$5 course fee): Resident \$349; Non-resident \$1002.60.

French painting of the 17th and first half of the 18th centuries. (No prereq)

Fall Qtr, Sec 1, M, 6:20-8:50, JonesH 207B, Stoughton

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**ArtH 3411 HISTORY OF ARCHITECTURE TO 1750.** 4 credits, §LA 3411, §Arch 3411, tuition\* (includes \$5 course fee): Resident \$349; Non-resident \$1002.60.

History of architecture and city planning from antiquity to 1750, as illustrated by major monuments from Western and non-Western cultures. **Must be taken A-F.** (No prereq. Meets concurrently with LA 3411, Arch 3411. Limited to a combined total of 100)

Fall Qtr, ★Sec 1, Th, 5:30-8:40, Arch 25, Satkowski

**ArtH 3412 HISTORY OF ARCHITECTURE SINCE 1750.** 4 credits, §LA 3412, §Arch 3412, tuition\* (includes \$5 course fee): Resident \$349; Non-resident \$1002.60.

A history of the major monuments, concepts, and theories of urbanism and architecture since 1750. **Must be taken A-F.** (No prereq. Meets concurrently with LA 3412, Arch 3412. Limited to a combined total of 100)

Winter Qtr, ★Sec 1, Th, 5:30-8:40, Arch 25, Solomonson

(See also CSch 0177, The Architecture of Frank Lloyd Wright)

**ArtH 3585 AFRO-AMERICAN ART.** 4 credits, tuition\* (includes \$5 course fee): Resident \$349; Non-resident \$1002.60.

History of Afro-American Art from the 18th century through the present day. (No prereq)

Fall Qtr, Sec 1, W, 4:30-7, JonesH 207B, Griebel

**ArtH 3591 AFRICAN-AMERICAN ARTISTS ON FILM.** 4 credits, tuition\* (includes \$20 course fee): Resident \$364; Non-resident \$1017.60.

Explores the work of 20th-century African American artists as presented on film. (Prereq 3585 or #) Spring Qtr, Sec 1, M, 4:30-7, JonesH 207B, Griebel

**ArtH 3940 TOPICS: INDEPENDENT FILM-MAKING IN AMERICA.** 4 credits, §ArtH 5940, §ArtS 3655, tuition\* (includes \$20 course fee): Resident \$364; Non-resident \$1017.60.

The emergence of the American independent film movement in the late '50s and early '60s. Like the French New Wave, this group of movie makers (including Shirley Clarke, the Medases, the Kuchar brothers, and Bruce Conner) exerted a strong and lasting impact on American filmmaking. (No prereq. Meets concurrently with ArtH 5940 sec 1. Limited to a combined total of 40)

Winter Qtr, ★Sec 1, T, 6-9, Walker Art Center Lecture Room, Jenkins

**ArtH 3940 TOPICS: CINEMA OF HITCHCOCK.** 4 credits, tuition\* (includes \$20 course fee): Resident \$364; Non-resident \$1017.60.

An exploration of Hitchcock's major thematic concerns (guilt, romantic obsession, the seductiveness of evil, the idea of the double), and technical virtuosity; the cult of horror and suspense; the thriller as genre; Hitchcock's significance as a cultural icon. Films will be drawn from both the English and American periods, and will include *The 39 Steps*, *Shadow of a Doubt*, *Strangers on a Train*, and *Vertigo*. (No prereq. Meets concurrently with 5940 sec 2. Limited to a combined total of 40)

Spring Qtr, ★Sec 2, T, 6-9, AndH 310, Silberman

**ArtH 5463 EARLY 20TH-CENTURY PAINTING.** 5 credits, tuition\* (includes \$5 course fee): Resident \$435; Non-resident \$1252; Resident Graduate credit \$595; Non-resident Graduate credit \$1303; Resident Graduate School credit \$1082.50; Non-resident Graduate School credit \$2375.50.

Fauvism, Cubism, Surrealism, Dadaism, and early abstraction. (Prereq one modern art course or #. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr, Sec 1, W, 5-7:30, JonesH 207B, Weisberg

**ArtH 5725 CERAMICS IN THE FAR EAST.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Ceramic art in the Far East: China, Korea, and Japan, from Neolithic times to the present. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr, Sec 1, Th, 6:20-8:50, JonesH 207B, Poor

**ArtH 5769 CONNOISSEURSHIP IN ORIENTAL ART.** 5 credits, tuition\* (includes \$5 course fee): Resident \$435; Non-resident \$1252; Resident Graduate credit \$595; Non-resident Graduate credit \$1303; Resident Graduate School credit \$1082.50; Non-resident Graduate School credit \$2375.50.

Oriental art objects in local collections. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr, Sec 1, T (begins Oct. 3; no class Sept. 26), 1:45-4:30, Mpls Institute of Arts, Auditorium, 2400 S. 3 Ave, Poor. Offered through Continuing Education for Women

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Arth 5940 TOPICS: INDEPENDENT FILM-MAKING IN AMERICA.** 4 credits, §Arth 3940, §ArtS 3655, tuition\* (includes \$15 course fee); Resident \$359; Non-resident \$1012.60; Resident Graduate credit \$487; Non-resident Graduate credit \$1053.40; Resident Graduate School credit \$877; Non-resident Graduate School credit \$1911.40.

See course description for Arth 3940 sec 1. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with Arth 3940 sec 1. Limited to a combined total of 40)

Winter Qtr, ★Sec 1, T, 6-9, Walker Art Center  
Lecture Room, Jenkins

**Arth 5940 TOPICS: CINEMA OF HITCHCOCK.** 4 credits, tuition\* (includes \$20 course fee); Resident \$364; Non-resident \$1017.60; Resident Graduate credit \$492; Non-resident Graduate credit \$1058.40; Resident Graduate School credit \$882; Non-resident Graduate School credit \$1916.40.

See course description for Arth 3940 sec 2. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3940 sec 2. Limited to a combined total of 40)

Spring Qtr, ★Sec 2, T, 6-9, AndH 310, Silberman

## Astronomy (Ast)

(356 Physics: 624-0211)

### Institute of Technology

Textbooks for most Ast courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

(See also General College courses in natural science)

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Ast. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

*Astronomy deals with the study of all constituents of the universe and of the laws which govern the formation, composition, and evolution of these constituents.*

*Astronomy 1011 and 1015 together satisfy the CLA laboratory science requirement. Students may take Ast 1015 at any time during or after they have taken Ast 1011. Ast 1011 and 1015 are being replaced by Ast 1031 and 1032 beginning Fall 1996; this will be the last academic year that Ast 1011 and 1015 will be offered. Ast 1031 and 1032 will fulfill the old CLA requirements.*

**Ast 1011 DESCRIPTIVE ASTRONOMY.** 4 credits, §1021, §1008, 1009, §1031 or 1032, tuition\*: Resident \$318; Non-resident \$922.20.

The sun, the moon, the planets, and their relationships; stars, galaxies, cosmology, and the physical universe. Some math at the level of algebra and trigonometry will be used. (No prereq. A joint Day/Extension class)

Fall Qtr, ○Sec 1, MW, 6:30-8:10, Phys 150

Winter Qtr, ○Sec 2, MW, 6:30-8:10, Phys 150

Spring Qtr, ○Sec 3, MW, 6:30-8:10, Phys 150

**Ast 1015 DESCRIPTIVE ASTRONOMY LABORATORY.** 1 credit, §1025H, tuition\*: Resident \$79.50; Non-resident \$230.55.

Laboratory offered in conjunction with 1011. Opportunity to observe with telescope. *No registrations allowed after the first class meeting.* Honors sections of Astronomy Laboratory are now available to Extension students. For more information, contact the Astronomy department at 624-0211. (Prereq high school algebra; high school trigonometry recommended. A joint Day/Extension class limited to 15 Extension students)

Fall Qtr, ★○Sec 1, T, 6:15-8, Phys 450

Fall Qtr, ★○Sec 2, W, 8:15-10, Phys 450

Fall Qtr, ★○Sec 3, Th, 5:15-7, Phys 450

Winter Qtr, ★○Sec 4, T, 6:15-8, Phys 450

Winter Qtr, ★○Sec 5, W, 8:15-10, Phys 450

Winter Qtr, ★○Sec 6, Th, 5:30-7:15, Phys 450

Spring Qtr, ★○Sec 7, T, 6:15-8, Phys 450

Spring Qtr, ★○Sec 8, W, 8:15-10, Phys 450

Spring Qtr, ★○Sec 9, Th, 5:15-7, Phys 450

**Minnesota Starwatch**—a taped message on the night sky in Minnesota, prepared by the Astronomy Department at the University, can be reached by calling 624-2001.

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



## Biochemistry (BioC)

(140 Gortner Laboratory: 624-7755)

### College of Biological Sciences

Textbooks for most BioC courses are available at University of Minnesota Bookstore—St. Paul (624-9200).

(See also Biology; and Research Explorations, page 474)

Mark L. Arneson, Lecturer  
 Bianca M. Conti-Fine, Professor  
 Gary L. Nelsestuen, Professor  
 Michael Raftery, Professor

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Biochemistry. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**Attendance in classes**—*Students are expected to attend the first class meeting of every course in which they are registered. Attendance at the first class session of all limited-enrollment classes (designated by a ★ in this bulletin) is required unless students obtain approval for the intended absence before the first meeting. Without this approval, students may lose their place in class to other students. Students who miss the first class and wish to remain in the class must contact the course instructor as soon as possible. Instructors have the right to deny admission if the course is full. Students must officially cancel any course to which they are denied admission after registering.*

**BioC 3021 (formerly Biol 5001) BIOCHEMISTRY.** 4 credits, §Biol 5001, tuition\*: Resident \$374; Non-resident \$1084.60.

An introduction to the fundamentals of biochemistry is presented, including the structure and function of proteins, nucleic acids, lipids, and carbohydrates; metabolism and regulation of metabolism; quantitative treatments of chemical equilibria; enzyme catalysis, and bioenergetics; and the chemical basis of genetic information flow. (Prereq Biol 1009 or 1202, 8 cr organic chemistry. A joint Day/Extension class)

Fall Qtr, ●Sec 1, TTh, 5:30-7:20, McNH 33, StP Campus, Arneson

Spring Qtr, ●Sec 2, MW, 4:05-5:55, ClaOff B45, StP Campus

(Also see Biol 5003, Genetics, page 91)

**BioC 5025 LABORATORY IN BIOCHEMISTRY.** 2 credits, tuition\*: Resident \$187; Non-resident \$542.30; Resident Graduate credit \$236; Non-resident Graduate credit \$519.20; Resident Graduate School credit \$431; Non-resident Graduate School credit \$948.20.

Discussions of techniques and problem-solving approaches illustrated with laboratory experiments and demonstrations. (Prereq Biol 5001 or ¶BioC 3021 or BioC 3021 or BioC 5331 or ¶BioC 5331. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students) Winter Qtr, ★●Sec 1, T, 5:30-10, BioSci 70, StP Campus, Conti-Fine

**BioC 5401 METABOLISM AND ITS REGULATION.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Study of underlying principles that determine the metabolism of both common and unusual compounds in plants, animals, and microbes. Regulation of carbon and energy flow in whole organisms will be discussed. (Prereq 3021 or 5331. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension students)

Fall Qtr, ★●Sec 1, TTh, 5:15-6:30, BioSci 70, StP Campus, Nelsestuen

## Biological Sciences

Please see the following alphabetical listings for departments and related course offerings:

- Animal Science
- Biochemistry
- Biology
- Cell Biology and Neuroanatomy
- Chemistry
- Clinical Laboratory Science
- Ecology, Evolution, and Behavior
- General College
- Genetics and Cell Biology
- Health Sciences
- History of Science and Technology
- Interdepartmental Study
- Microbiology
- Nursing
- Pharmacy
- Plant Biology
- Public Health

Also see Interdepartmental Study courses, page 260.

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

### Biology (Biol)

(223 Snyder Hall: 624-9717)

#### College of Biological Sciences

Textbooks for Biol courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall for Minneapolis campus classes (625-6000); and at University of Minnesota Bookstore—St. Paul for classes on that campus (624-9200).

(See also General College courses in natural science; Biochemistry; Ecology, Evolution, and Behavior; Genetics and Cell Biology; Microbiology; Plant Biology; Interdepartmental Study; *Natural and Physical Sciences* in Compleat Scholar non-credit section; and WoSt 3202, Biology of Women)

David Biesboer, Associate Professor

Alan Hooper, Professor

Norman S. Kerr, Professor

Paul A. Lefebvre

Val W. Woodward, Professor

**Degree Program in Biology**—It is possible to complete the majority of the course requirements for a Bachelor of Arts or Bachelor of Science degree in Biology through Extension. These requirements include the necessary courses in chemistry, mathematics, physics, composition, foreign languages, and liberal education. In addition, several of the required core courses in Biology are regularly scheduled in Extension. All such CEE courses are acceptable to the Biology degree program.

Students interested in pursuing a degree in Biology through Extension are strongly encouraged to discuss their interests with an adviser in the College of Biological Sciences Student Services Office, 624-9717. Advisers are prepared to discuss degree program planning as well as course selection options.

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Biology. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**Continuing Education for Women (CEW) section available in the following course:** Biol 1101

**Attendance in classes**—*Students are expected to attend the first class meeting of every course in which they are registered. Attendance at the first class session of all limited-enrollment classes (designated by a ★ in this bulletin) is required unless students obtain approval for the intended absence before the first meeting. Without this approval,*

*students may lose their place in class to other students. Students who miss the first class and wish to remain in the class must contact the course instructor as soon as possible. Instructors have the right to deny admission if the course is full. Students must officially cancel any course to which they are denied admission after registering.*

**Biol 1009 GENERAL BIOLOGY**, 5 credits, tuition\* (includes \$10 course fee): Resident \$407.50; Non-resident \$1162.75. (IS)

An introduction to the principles of biology. The cell, metabolism, heredity, reproduction, ecology and evolution. Includes laboratory. For majors that require a comprehensive survey of biology in a single quarter. *Pre-biology majors see Biol 1201-1202-1203; non-science majors see 1201.* (No prereq; high school chemistry strongly recommended. A joint Day/Extension class. Each section limited to 24 Extension students)

Fall Qtr, ★●Sec 30, Lect MT, 6-7:15, MoosT 2-650; Lab M, 7:30-9:15, Lab W, 6-7:45, KoltH S167

Fall Qtr, ★●Sec 31, Lect MT, 6-7:15, MoosT 2-650; Lab M, 7:30-9:15, Lab W, 6-7:45, KoltH S170

Fall Qtr, ★●Sec 32, Lect MT, 6-7:15, MoosT 2-650; Lab T, 7:30-9:15, Lab Th, 6-7:45, KoltH S160

Fall Qtr, ★●Sec 33, Lect MT, 6-7:15, MoosT 2-650; Lab T, 7:30-9:15, Lab Th, 6-7:45, KoltH S167

Spring Qtr, ★●Sec 34, Lect MT, 6-7:15, MoosT 2-650; Lab M, 7:30-9:15, Lab W, 6-7:45, KoltH S167

Spring Qtr, ★●Sec 35, Lect MT, 6-7:15, MoosT 2-650; Lab M, 7:30-9:15, Lab W, 6-7:45, KoltH S170

Spring Qtr, ★●Sec 36, Lect MT, 6-7:15, MoosT 2-650; Lab T, 7:30-9:15, Lab Th, 6-7:45, KoltH S160

Spring Qtr, ★●Sec 37, Lect MT, 6-7:15, MoosT 2-650; Lab T, 7:30-9:15, Lab Th, 6-7:45, KoltH S167

**Biol 1101 HEREDITY AND HUMAN SOCIETY**, 4 credits, §GCB 3002, tuition\*: Resident \$318; Non-resident \$922.20. (IS)

Principles of heredity and their social and cultural implications. *No credit if taken after Biol 5003 or GCB 3022; for students in programs not directly related to biological sciences.* (No prereq)

Fall Qtr, Sec 1, Lect TTh, 2:30-4:10, MacP, Woodward. Offered through Continuing Education for Women

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**Biol 1103 GENERAL BOTANY.** 5 credits, §3012, §3812, tuition\*: Resident \$397.50; Non-resident \$1152.75.

Plant organization, function, growth and development, and reproduction. Includes laboratory. *Students who plan to major in biology in CLA or any bioscience major in CBS should take 3012.* (Prereq 1009 or 1202. Limited to 20)

Winter Qtr, ★Sec 1, Lect TTh, 6-7:10, BioSci 12, StP Campus, Biesboer; Lab TTh, 7:30-9:30, BioSci 176, StP Campus, Biesboer

**Biol 1201 EVOLUTIONARY AND ECOLOGICAL PERSPECTIVES.** 5 credits, §1008, tuition\* (includes \$10 course fee): Resident \$407.50; Non-resident \$1162.75.

Origins and foundations of modern evolutionary thought, putting evolutionary theory to work; evolution and ecology. Can be taken as a single course or as the first in the Biol 1201, 1202, 1203 sequence. *Note: No credit given if credit has been received for Biol 1008.* (No prereq. Lectures meet concurrently. A joint Day/Extension class. Each section limited to 20 Extension students)

Winter Qtr, ★Sec 30, Lect MW, 6-7:15, MoosT 2-650; Lab T, 6-9, KoltH S187

Winter Qtr, ★Sec 31, Lect MW, 6-7:15, MoosT 2-650; Lab Th, 6-9, KoltH S183

Winter Qtr, ★Sec 32, Lect MW, 6-7:15, MoosT 2-650; Lab Th, 6-9, KoltH S187

**Biol 3011 ANIMAL BIOLOGY.** 5 credits, §Biol 1106, §Biol 1806, tuition\*: Resident \$467.50; Non-resident \$1355.75.

Comparison of ways different phyla have solved similar physiological problems. Laboratory includes survey of major animal groups, physiological experiments, and dissections. TTh labs begin Sept. 26; WF labs begin Sept. 27. (Prereq Biol 1009 or 1202, Chem 1052. Lectures meet concurrently and with 3111. A joint Day/Extension class limited to 2 Extension students unless otherwise indicated below)

Fall Qtr, ★Sec 1, TTh, Lect, 5:30-6:45, ClaOff B45, StP Campus, Kerr; TTh, Lab, 12:50-2:30, BioSci 107, StP Campus

Fall Qtr, ★Sec 2, TTh, Lect, 5:30-6:45, ClaOff B45, StP Campus, Kerr; TTh, Lab, 3-4:40, BioSci 107, StP Campus (Limit 8)

Fall Qtr, ★Sec 3, TTh, Lect, 5:30-6:45, ClaOff B45, StP Campus, Kerr; TTh, Lab, 3-4:40, BioSci 176, StP Campus (Limit 8)

Fall Qtr, ★Sec 4, TTh, Lect, 5:30-6:45, ClaOff B45, StP Campus, Kerr; TTh, Lab, 7-8:40, BioSci 176, StP Campus (Limit 8)

Fall Qtr, ★Sec 5, TTh, Lect, 5:30-6:45, ClaOff B45, StP Campus, Kerr; TTh, Lab, 7-8:40, BioSci 107, StP Campus (Limit 10)

Fall Qtr, ★Sec 6, TTh, Lect, 5:30-6:45, ClaOff B45, StP Campus, Kerr; WF, Lab, 10-11:40, BioSci 107, StP Campus

Fall Qtr, ★Sec 7, TTh, Lect, 5:30-6:45, ClaOff B45, StP Campus, Kerr; WF, Lab, 1:30-3:10, BioSci 107, StP Campus

**BioC 3021 (formerly Biol 5001) BIOCHEMISTRY.** See listing under Biochemistry.

**Biol 3111 ANIMAL BIOLOGY.** 4 credits, §Biol 3011, tuition\*: Resident \$374; Non-resident \$1084.60.

Comparative physiology of various animal groups; coordination, movement, support, excretion, reproduction. (Prereq 1009 or 1202, 1106 or 1806, Chem 1052. Lectures meet concurrently with Biol 3011 lecture. A joint Day/Extension class)

Fall Qtr, Sec 1, TTh, 5:30-7:10, ClaOff B45, StP Campus, Kerr

**Biol 5003 GENETICS.** 4 credits, §GCB 3022, §GCB 5022, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40. (IS)

Introduction to the nature of genetic information, its transmission from parents to offspring, its expression in cells and organisms, and its course in populations. (Prereq 5001 or BioC 3021 or BioC 5331. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr, Sec 1, MW, 6:30-8:10, ClaOff B35, StP Campus, Lefebvre

*Biol 5003 and 5004 are also offered through Group Independent Study. For information, see page 499.*

**Biol 5004 CELL BIOLOGY.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40. (IS)

Structures and functions of membranes, organelles, and other macromolecular aggregates found in plant, animal, and bacterial cells. Cell form and movement, intercellular communication, transport, and secretion. (Prereq Biol 5001 or BioC 3021 or BioC 5331 and Biol 5003 or BioC 5333. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr, Sec 1, TTh, 6-7:40, BorH 335, StP Campus, Hooper

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**BioC 5025 LABORATORY IN BIOCHEMISTRY.** See listing under Biochemistry.

**Biol 5951 SOCIAL USES OF BIOLOGY.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Influence of biological science on the quality of human life; agriculture, medicine, occupational health, environmental science, and theories of human nature. Responsibilities and roles of biologists in policy formulation in the scientific and political world. **Must be taken S-N.** (Prereq 10 cr sciences. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr, ●Sec 1, T, 6:20-8:50, BioSci 70, StP Campus, Hooper

### Biosystems and Agricultural Engineering (AgEn)

(213 Agricultural Engineering: 625-7733)

#### Institute of Technology

Textbooks for most AgEn courses are available at University of Minnesota Bookstore—St. Paul (624-9200).

Kevin A. Janni, Professor  
John L. Nieber, Associate Professor

**Joint Day/Extension Classes**—You may register through Extension for most day school classes scheduled before 4 p.m. in AgEn. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**AgEn 5560 MECHANICS OF FLOW IN THE UNSATURATED ZONE.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Fluid retention and transmission properties of unsaturated porous media. Equations of mass conservation and Darcy's law for unsaturated porous media. Simultaneous flow of immiscible fluids. Analytical, finite difference and finite element solutions to the governing equations. Evaluation of the status and migration of contaminating non-aqueous fluids in the unsaturated zone. (Prereq Soil 5232, Math 3261, or #; upper division IT or grad IT or grad

COA; 1 lecture. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr, ●Sec 1, M, 6-9:30, AgEng 308, StP Campus, Nieber

**AgEn 5745 VENTILATING SYSTEMS FOR INDOOR AIR QUALITY.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Impact of indoor air quality on humans, animals, and plants. Contaminant sources. Ventilating processes, systems, control strategies, and equipment for indoor air quality control. Case studies from residential, commercial, and agricultural systems. (Prereq upper division IT or graduate student, ME 3301, CE 3400 or AEM 3200. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, ●Sec 1, MW, 4:30-6:20, AmundH 124, Janni

### Botany

(See Biol 1103 above and Plant Biology, page 315)

### Business, Bachelor of Applied (BAB)

(306 Wesbrook Hall: 626-8724)

#### Continuing Education and Extension/University College

Textbooks for most BAB courses are available at the Inver Hills Community College bookstore.

**A Bachelor of Applied Business degree (B.A.B.) can be completed in the evening.**

Continuing Education and Extension/University College offers the Bachelor of Applied Business degree in cooperation with Inver Hills Community College. See the Degrees and Certificates section of this bulletin for admission and curriculum requirements. Interested students should discuss plans with an adviser in CEE Counseling at (612) 625-2500.

All courses meet at Inver Hills. Priority in assignment of space in class is given to students admitted to the B.A.B. degree program. Students not admitted to the program may register on a space-available basis. Check with a CEE adviser on applicability of credits in B.A.B. courses if you are working on another University of Minnesota degree.

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

John M. Hasselberg, Lecturer in Strategic Management and Organization  
Nancy Johnson, M.B.A., Assistant Professor, Metro State University  
John Knauff, Professor, M.B.A. Director, Operations Management, University of St. Thomas  
Ann Lowry, Ph.D., Chair, Speech Communications, College of St. Catherine  
Victoria Mikelonis, Ph.D., Professor of Rhetoric and B.A.B. Faculty Director, University of Minnesota  
David Shupe, Ph.D., Program Director, CEE/UC, University of Minnesota  
Lee Wickstrom, Ph.D., Operations Management Department, Carlson School of Management

*Call 626-8724 for schedule information about the B.A.B. program and courses listed below.*

**BAB 3011 HISTORICAL PERSPECTIVES AND CONTEMPORARY BUSINESS CHALLENGES.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60.

Major challenges faced by contemporary businesses including global competitiveness, product and service quality, information revolution, and changing customer and work force demographics. Approaches to meeting these contemporary challenges are studied against a historical backdrop of evolving management practices. Emphasis is placed on the importance of developing systematic ways of analyzing complex problems where causes and effects can be analyzed in the context of larger systems. (Prereq Intro to Business or #. Limited to 25)

Fall Qtr, ★Sec 1, W, 6-9, IHCC, Hasselberg

**BAB 3012 PROBLEMS SOLVING IN COMPLEX ORGANIZATIONS.** 4 credits, tuition\*: Resident \$374; Nonresident \$1084.60.

An open systems perspective is developed. Emphasis is placed on the importance of analyzing root causes, and the effects of problems and solutions across boundaries in the organization. Process analysis is introduced as a tool for problem solving. Commonly used problem-solving frameworks or processes are taught. Techniques for conducting root cause analyses, expanding alternatives, predicting consequences, and making choices are studied and applied. (No prereq. Limited to 25)

Winter Qtr, ★Sec 1, T, 6-9, IHCC, Johnson

**BAB 3021 SMALL GROUP BEHAVIOR AND TEAMWORK.** 4 credits, tuition\*: Resident \$374; Nonresident \$1084.60.

The dynamics of small-group behavior with an emphasis on work groups in organizations. Factors affecting performance and productivity are examined. Various formal and informal roles are identified and provide a foundation for understanding how effective teamwork comes about and is sustained in work groups. Both effective leadership skills and followership are explored and practiced. (Prereq Intro to Small Group Behavior or sociology or psychology or #. Limited to 25)

Fall Qtr, ★Sec 1, Arr, 6-9, IHCC

**BAB 3022 MANAGING ORGANIZATIONAL RELATIONSHIPS.** 4 credits, tuition\*: Resident \$374; Nonresident \$1084.60.

Complexities involved in managing organizational relationships. Topics include political dimensions of organization life and diagnosing how power is distributed and exercised in modern organizations. Cooperative relationships are examined and frameworks for analyzing motives for observed behavior are presented. Skills for managing upward, lateral, and downward relationships are provided, with an emphasis on recognizing potential ethical dilemmas. (No prereq. Limited to 25)

Spring Qtr, ★Sec 1, T, 6-9, IHCC, Lowry

**BAB 3023 COMMUNICATING FOR RESULTS.** 4 credits, tuition\*: Resident \$374; Nonresident \$1084.60.

The ability to influence and persuade based on sound ideas is critical to effectiveness in organizations. This course focuses on aspects of communication that are essential to being persuasive and influential. Topics include organizing and presenting ideas effectively, strategies for audience analysis, choosing communication methods, making appropriate use of informal influence methods, and handling dissent. Processes for intercultural communication are introduced. (Prereq English Comp or #. Limited to 25)

Winter Qtr, ★Sec 1, Th, 6-9, IHCC, Mikelonis

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**BAB 3031 ACCESSING AND USING INFORMATION EFFECTIVELY.** 4 credits, tuition\*: Resident \$374; Nonresident \$1084.60.

Information resources available to businesses and how to use them. The course begins with conceptualization of the role of information in business operations, including information systems and data management. A typology of information is presented and applied in short case studies and exercises, including data-based, text-based, oral, written, and multimedia forms of information. Accessing external information for the firm is reviewed through experiences with library resources such as information search services, CD-ROM, and periodicals. Accessing internal information for the firm is reviewed through experiences with a desktop database system and electronic mail or computer conferencing. (Prereq Intro to Computers or #. Limited to 25)

Fall Qtr, ★Sec 1, T, 6-9, IHCC, Shupe

**BAB 3032 QUANTITATIVE SKILLS FOR DECISION MAKING.** 4 credits, tuition\*: Resident \$374; Nonresident \$1084.60.

Methods for analyzing and using quantitative information to support problem solving and decision making in business. Exploratory data analysis, visual display of data, and basic mathematical and statistical techniques for analysis will be studied and applied. Introduction to decision theory and decision modeling will be provided. Problems which can be formally modeled and solved through application of various operations research techniques will be presented so students appreciate how mathematical techniques are used to support problem solving and decision making in organizations. (Prereq Math for Decision Making or Statistics for Decision Making and Finite Math or #. Limited to 25)

Spring Qtr, ★Sec 1, Th, 6-9, IHCC

**BAB 3042 PLANNING AND IMPLEMENTATION AT THE BUSINESS UNIT LEVEL.** 4 credits, tuition\*: Resident \$374; Nonresident \$1084.60.

Creating and implementing operating plans at the business unit level. Types of plans covered include operations flow charts, budgets, schedules, and staffing plans. The importance of integrating plans with the overall business strategy is emphasized. Factors involved in successful implementation of the plans are examined. The importance of developing strategies for change is stressed. (No prereq. Limited to 25)

Spring Qtr, ★Sec 1, M, 6-9, IHCC, Knauff

**BAB 3043 PROJECT MANAGEMENT IN PRACTICE.** 4 credits, tuition\*: Resident \$374; Nonresident \$1084.60.

This course has two objectives. The first is to teach students about project management and the various tools and techniques available to support the project leader in such areas as scheduling, coordinating and allocating resources. The second is to provide students with an opportunity to carry out a field project and put the tools of project management into practice. The field project may involve a project with a nonprofit organization in the community, smaller businesses, or in the student's employing company. The projects should be carried out in teams wherever possible. (Prereq introductory-level Operations Management or Small Business Management or #. Limited to 25)

Fall Qtr, ★Sec 1, Arr, 6-9, IHCC

**BAB 3101 ACCOUNTING AND FINANCE FOR MANAGERS.** 4 credits, tuition\*: Resident \$374; Nonresident \$1084.60.

Expands on students' lower division work in financial accounting and adds principal concepts of finance. Emphasis is on business decision making from an accounting and financial perspective, including topics such as analysis of cost-volume-profit relationships, capital budgeting, variances, uses and sources of funds, and valuation. (Prereq Principles of Financial Accounting I and II or equivalent or #. Limited to 25)

Winter Qtr, ★Sec 1, Arr, 6-9, IHCC

**BAB 3103 MARKETING AND SALES.** 4 credits, tuition\*: Resident \$374; Nonresident \$1084.60.

Legal, behavioral, ethical, competitive, economic, and technological factors are examined as they affect product pricing, promotion, and marketing channel decisions. The personal selling function is presented as an integral part of the overall distribution system, with emphasis on sales force organization, selection, training, motivation, compensation, forecasting, budgeting, and control. (Prereq Intro to Marketing or Intro to Sales or #. Limited to 25)

Spring Qtr, ★Sec 1, Arr, 6-9, IHCC

*Courses tentatively scheduled for 1996-97 (call 626-8724 for descriptions and terms):*

- Quantitative Skills for Decision Making (4 cr)
- Leadership in a Global and Diverse Workplace (4 cr)
- Management and Human Resource Practices (4 cr)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Business Administration Courses through the Carlson School of Management

The Carlson School of Management offers degree and certificate programs. See the Degrees and Certificates section of this Bulletin.

Please see the following alphabetical listings for course offerings:

- Accounting
- Business Finance (see Finance)
- Business, Government, and Society
- Business Law
- Industrial Relations
- Information and Decision Sciences
- Insurance
- Logistics Management
- Management
- Marketing
- Operations and Management Sciences

(See also Economics; Comp 3022, Critical Reading and Writing for Management; Comp 3032, Pre-Professional Writing for Business; Rhetoric; Certified Employee Benefits Specialist [in Industrial Relations]; and General College)

For noncredit conferences or seminars in business and management, write or call Management Advancement Program, 626-8713; Professional Development and Conference Services, 625-6616; Executive Development Center, 280 Hubert H. Humphrey Center, 624-2545; and Employer Education Service, 423 Management/Economics Building, 624-5525.

**Undergraduate Program**—Students interested in the Bachelor of Science in Business degree offered through the Carlson School of Management should contact the Undergraduate Program office in room 290 of the Hubert H. Humphrey Center, 624-3313.

**MBA Program**—Students interested in the Master of Business Administration degree offered through the Carlson School of Management should contact the MBA Program office in room 295 of the Hubert H. Humphrey Center; telephone 624-0006 for information.

## Business and Marketing Education

(See *Business and Industry Education* in Vocational and Technical Education)

## Business, Government, and Society (BGS)

(835 Management/Economics: 624-5232)

### Carlson School of Management

Textbooks for most BGS courses are available at University of Minnesota Bookstore—West Bank (625-3000).

William Seeley, Lecturer in Strategic Management

### Business degree students must take Business, Government, and Society courses A-F.

**NOTE:** Students taking Carlson School of Management upper division undergraduate courses through CEE are expected to have completed the equivalent of 90 quarter college credits with a minimum of a "B-" grade average.

**BGS 3004 INTERNATIONAL BUSINESS.** 4 credits, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60. (IS)

World business with emphasis on the global economy, international concepts, global business structures, comparative cultures and environments, global business strategies, multinational corporations and technology, personnel and operations in the host nations. Resource (including energy) questions in their global contexts: quantities, demands, distribution of resources. (Prereq at least 90 credits completed or in progress. Limited to 40 students)

Fall Qtr, ★Sec 1, T, 5:45-8:45, BlegH 150

Winter Qtr, ★Sec 2, W, 5:45-8:45, BlegH 215

Spring Qtr, ★Sec 3, Th, 5:45-8:45, BlegH 215

**BGS 3014 TOPICS IN INTERNATIONAL BUSINESS: U.S.-EUROPEAN TRADE PRACTICES: Opportunities and Obstacles to Market Penetration.** 4 credits, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60.

Examines impact of European Economic Community (EEC), GATT Treaty, and independence of Eastern European nations on trade and investment opportunities for U.S. firms in Western and Eastern Europe. Trade treaty, cultural host country legal systems, and structural trade agreements are examined. Case examples involving export/import, joint ventures, licensing, mergers, and wholly owned subsidiaries are used to explore investment options. Student teams create business plans and negotiate investment deals between U.S., Western, and Eastern European countries. **May not be taken S-N.** (Prereq at least 90 credits completed or in progress. Limited to 35)

Fall Qtr, ★Sec 1, W, 5:45-8:45, BlegH 225,

Seeley

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**BGS 3014 TOPICS IN INTERNATIONAL BUSINESS: U.S.-ASIAN TRADE PRACTICES: Opportunities and Obstacles to Market Penetration.** 4 credits, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60.

Reviews current trade and business investment practices between U.S. companies in Japan, Taiwan, China, Hong Kong, Korea, Singapore, Malaysia, and Thailand. Cultural, legal, and structural trade barriers are examined. Regulations and customary business practices in Pacific Rim nations toward expatriate American men and women are examined in depth. Direct investment laws and regulations of Asian nations applied to foreign companies are surveyed. **May not be taken S-N.** (Prereq: at least 90 credits completed or in progress. Limited to 35) Spring Qtr, ★Sec 2, W, 5:45-8:45, BlegH 260, Sealey

(See also REX 0603, The Flat Panel Display: U.S. Commercialization of a New Industry)

### Business Finance

(See Finance)

### Business Law (BLaw)

(675 Management/Economics: 624-9358)

#### Carlson School of Management

Textbooks for most BLaw courses are available at University of Minnesota Bookstore—West Bank (625-3000).

(See also General College)

Albert O. Andrews, Jr., Lecturer and  
Coordinator of Business Law

Donald Campbell, Lecturer

John Troyer, Lecturer

Thomas Lovett, Lecturer

Gregory Soule, Lecturer

Thomas Thorfinnson, Lecturer

**NOTE:** Students taking Carlson School of Management upper division undergraduate courses through CEE are expected to have completed the equivalent of 90 quarter college credits with a minimum of a "B-" grade average.

**BLaw 0001C COMMON LEGAL PROBLEMS.** 3 certificate credits, tuition\* (includes \$16 special fee): \$254.50.

Provides a comprehensive course in everyday legal principles, designed to assist laypersons in recognizing their legal rights and more intelligently and efficiently managing their 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; workers' compensation laws; rights and responsibilities within family, including divorce; collection of monies through garnishment, attachment, and mechanic's liens; criminal law. (No prereq. Limited to 30)

Fall Qtr, ★Sec 1, Th, 6:20-8:50, RarigC 610, Thorfinnson

**BLaw 3058 INTRODUCTION TO LAW, THE LAW OF CONTRACTS AND SALES CONTRACTS.** 4 credits, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60. (IS)

Study of the origin of law, its place in and effect upon society; the history and development of law; the system of courts; and legal procedure. An extensive study of the law of contracts as the basic law affecting business transactions; and law affecting the sales of goods contracts. May not be taken S-N. (Prereq: Econ 1101 or equivalent and at least 90 credits completed or in progress. Limited to 45)

Fall Qtr, ★Sec 1, M, 6-9, BlegH 205, Lovett

Fall Qtr, ★Sec 2, T, 6-9, BlegH 135, Campbell

Winter Qtr, ★Sec 3, M, 6-9, BlegH 225, Andrews

Winter Qtr, ★Sec 4, T, 6-9, BlegH 205, Campbell

Spring Qtr, ★Sec 5, M, 6-9, BlegH 225, Andrews

Spring Qtr, ★Sec 6, Th, 6-9, BlegH 225, Campbell

**BLaw 3078 LAW: AGENCY, PARTNERSHIPS, CORPORATIONS, AND COMMERCIAL PAPER.** 4 credits, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60. (IS)

A study of law affecting the relationship between principal and agent, master and servant, and employer and employee. Includes the 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 and contracts referred to as commercial papers (negotiable instruments), with emphasis on effect of the Uniform Commercial Code. (Prereq: 3058 and at least 90 credits completed or in progress. A joint Day/Extension class limited to 15 Extension students) Winter Qtr, ★Sec 1, M, 6-9, Law 3, Troyer

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



**BLaw 3088 LAW OF PERSONAL PROPERTY, REAL PROPERTY, AND WILLS AND ESTATES.** 4 credits, tuition\* (includes \$16 special fee); Resident \$390; Non-resident \$1100.60. (IS)

Study of the basic concepts of personal property, including rights of possessors, bailee, finders and holders of security interests and includes the study of the basic concepts and principles of real property law; transfers of ownership, control of and encumbering such interests. Concludes with a brief study of the law of wills and estates in passing rights to property in event of death. (Prereq 3058 and at least 90 credits completed or in progress. A joint Day/Extension class limited to 25 Extension students) Spring Qtr, ★Sec 1, M, 6-9, BlegH 255, Troyer

## Cell Biology and Neuroanatomy (CBN)

(4-135 Jackson Hall: 624-1123)

### Medical School

Textbooks for most CBN courses are available at University of Minnesota Bookstore—Health Sciences (625-8600).

(See also Biology; Physical Medicine and Rehabilitation; and GC 1134, Cardiovascular Anatomy and Physiology)

Donald W. Robertson, Associate Professor

**CBN 3001 HUMAN ANATOMY.** 4 credits, tuition\*: Resident \$600; Non-resident \$1320.

Survey of human anatomy, with some clinical and functional correlations. *Lecture only; see 3003 for lab.* (Prereq 1 qtr college biology, minimum soph status)

Spring Qtr, Sec 1, T, 6-8, MoosT 2-520; W, 6-7, MoosT 2-520, Robertson

**CBN 3003 HUMAN ANATOMY LABORATORY.** 1 credit, tuition\*: Resident \$150; Non-resident \$330.

Laboratory prosection and observation of human anatomy. (Prereq 3001 or ¶3001, 1 qtr college biol, minimum soph status. Limited to 60)

Spring Qtr, ★Sec 1, W, 7-9:40, MoosT 2-520, Robertson

## Certified Employee Benefits Specialist

See Employee Benefits Specialist section of this bulletin.

## Chemical Dependency Counseling

(See Family Social Science)

## Chemistry (Chem)

(115 Smith Hall: 624-0026)

### Institute of Technology

Textbooks for most Chem courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

(See also GC 1166, Physical Science: Principles of Chemistry; CSch0563, An Introduction to the Magnificent World of Molecules; and chemistry projects in Research Explorations)

A \$40 chemistry deposit card is required for all the laboratory courses in chemistry. Information concerning the procurement of this card will be given at the first meeting of each class. This card is available for purchase at the Registration Desk in the Registration Office, 101 Westbrook Hall. The office is open until 8 p.m. most evenings early in the quarter (telephone 625-3333 to verify hours). Payment is accepted by personal check, cash, or credit card for the full amount (credit card may *not* be combined with cash or check for payment). Charges for laboratory fees, material, and breakage will be punched out of the \$40 deposit card. Any balance will be returned to the student at the end of the quarter; information about where to obtain a refund of the balance is printed on the back of the deposit card.

**Note:** Completion of a pretest, or satisfactory completion of Chem 1001, is suggested for enrollment in Chem 1051 to verify adequate preparedness. For dates, times, and locations of the chemistry pretests, please call (612) 624-0026.

*Chemistry courses tend to close quickly; therefore, early registration is suggested. Once a Chem course is closed, a waiting list will be maintained in 115 Smith Hall. Students must attend and be on time for the first night of class or risk losing their place in the class or on the waiting list. For information, telephone (612) 624-0026.*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Chem 1001 GENERAL PRINCIPLES OF CHEMISTRY.** 4 credits, §Chem 1003, 1008, tuition\* (includes \$5 special fee): Resident \$323; Non-resident \$927.20.

Introduction to chemistry, matter and energy, atoms, molecules, chemical bonding, the mole and chemical calculations, gases, liquids, solids, solutions, chemical reactions, acids, bases and equilibrium. (Prereq high school chemistry or equivalent; 2 yrs high school mathematics required, 4 yrs recommended; high school physics recommended. Limited to 90)

Fall Qtr, ★Sec 1, Rec\* T, 6-6:50; Lab T, 7-9:45, SmithH 249; Lect Th, 6-9, SciCB 325\*\*

Fall Qtr, ★Sec 2, Rec\* W, 6-6:50; Lab W, 7-9:45, SmithH 249; Lect Th, 6-9, SciCB 325\*\* (Limit 65)

\*Recitation room assignments will be posted outside 115 Smith Hall on the first night recitation meets.

\*\*Students must attend and be on time for the first class meeting and first lab meeting or risk losing their place in class.

**Chem 1002 BASIC ORGANIC CHEMISTRY.** 4 credits, §3301, §3302, tuition\* (includes \$5 special fee): Resident \$323; Non-resident \$927.20.

Introduction to organic chemistry; emphasis on biological systems. *Primarily for nursing and forestry students; all IT students excluded without special permission; terminal course.* (Prereq 1001 or passing placement examination. Limited to 93)

Winter Qtr, ★Sec 1, Rec\* Th, 6-6:50; Lab Th, 7-9:45, SmithH 249; Lect T, 6-9, SciCB 375\*\*

\*Recitation room assignments will be posted outside 115 Smith Hall on the first night recitation meets.

\*\*Students must attend and be on time for the first class meeting and first lab meeting or risk losing their place in class.

**Chem 1051-1052 CHEMICAL PRINCIPLES I AND II.** 4 credits each quarter, tuition\* each quarter (includes \$5 special fee): Resident \$323; Non-resident \$927.20.

Atomic theory, periodic properties of elements, chemical thermodynamics, development of the use of structural concepts, geometry of molecules, bonding theory, behavior of the gaseous and liquid states, solid state and materials chemistry, dynamics, equilibrium, behavior of solutions, acids and bases, descriptive chemistry of elements and compounds. (Prereq 1001 or passing chemistry placement examination for 1051. 1051 for 1052. Limited to 148)

Winter Qtr, 1051, ★Sec 1, Rec\* Th, 6-6:50; Lab Th, 7-9:45, SmithH 110; Lect T, 6-9, SciCB 325\*\*

Spring Qtr, 1052, ★Sec 1, Rec\* Th, 6-6:50; Lab Th, 7-9:45, SmithH 210; Lect T, 6-9, SciCB 325\*\* (Limit 106)

\*Recitation room assignments will be posted outside 115 Smith Hall on the first night recitation meets.

\*\*Students must attend and be on time for the first class meeting and first lab meeting or risk losing their place in class.

**Chem 3100 QUANTITATIVE ANALYSIS.** 3 credits, 3100-3101†, tuition\*: Resident \$280.50; Non-resident \$813.45.

A survey of quantitative methods of analysis. Lecture. Not for chemistry majors. (Prereq 1052. Limited to 50 students)

Spring Qtr, ★Sec 1, MW, 6:15-7:30, SmithH 331

Students interested in taking Quantitative Analysis Laboratory (Chem 3101†) should be aware that the course is not available through Extension. However, Extension students may be able to register for the regular day school sections through the Extension Division for fall quarter. A summer offering is usually available; check the summer schedule for dates and times. Extension students interested in taking this course would have to accommodate themselves to the regularly scheduled laboratory periods during these quarters. Laboratory sessions are offered two days a week from 12:20 p.m. to 4:10 p.m. in the fall, and 9 a.m. to 1 during the summer.

**Chem 3301-3302 ELEMENTARY ORGANIC CHEMISTRY LECTURE I-II.** 4 credits each quarter, tuition each quarter\*: Resident \$374; Non-resident \$1084.60.

Important classes of organic compounds, both aliphatic and aromatic, together with some heterocyclic compounds. **Must be taken A-F.** (Prereq 1052 or equivalent for 3301; 3301 for 3302. Limited to 200)

Fall Qtr, 3301, ★Sec 1, Lect MW, 6-7:55, SciCB 325

Winter Qtr, 3302, ★Sec 1, Lect MW, 6-7:55, SciCB 325

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**Chem 3305-3306 ELEMENTARY ORGANIC CHEMISTRY LABORATORY I-II.** 2 credits each quarter, tuition\* each quarter (includes \$5 special fee): Resident \$192; Non-resident \$547.30. Laboratory work includes the preparation of typical substances treated in 3301- 3302. **Must be taken A-F.** (Prereq 3301 or ¶3301 for 3305, 3302 or ¶3302 for 3306. Limited to 48)

Fall Qtr, 3305, ★Sec 1, Lect, Th, 5:30-6:15, SmithH 331; Lab, Th, 6:15-10, SmithH 349\*

Winter Qtr, 3306, ★Sec 1, Lect, Th, 5:30-6:15, SmithH 331; Lab, Th, 6:15-10, SmithH 349\*

\*Students *must attend and be on time for the first lab meeting or risk losing their place in class.*

### Chicano Studies (Chic)

(102 Scott Hall: 624-6309)

#### College of Liberal Arts

Textbooks for most Chic courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

Marilyn Bowman, Lecturer

Maria Calderon, Lecturer

Susan Green, Teaching Assistant

Guillermo Rojas, Associate Professor

(See also History and CSch 0465, Latin American Fiction)

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Chicano Studies. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**Chic 3107 INTRODUCTION TO CHICANO STUDIES: THE CHICANO IN CONTEMPORARY SOCIETY.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

The formation of contemporary Chicano political, economic, and cultural consciousness, and the forms in which it has been expressed, 1960-present. *Meets CLA Cultural Pluralism requirements.* (No prereq) Spring Qtr, Sec 1, W, 6-8:30, FolH 234

**Chic 3375 FOLKLORE OF GREATER MEXICO.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Survey of scholarly materials on Hispanic folk religion, arts, crafts, foodways, and oral literature. (No prereq)

Fall Qtr, Sec 1, M, 6:20-8:50, ChDev 216, Rojas

**Chic 3441 THE SPANISH-MEXICAN BORDERLANDS AND THE CHICANO EXPERIENCE TO 1900.** 4 credits, §Hist 3441, tuition\*: Resident \$344; Non-resident \$997.60.

The history of Chicanos to 1900. The Spanish conquest and colonization of the borderlands. Mexican society in the early 19th century, the Mexican-American War and aftermath. *Meets CLA Cultural Pluralism requirement.* (No prereq. Meets concurrently with Hist 3441)

Spring Qtr, Sec 1, W, 6:20-8:50, ChDev 105, Bowman

**Chic 3442 CHICANO HISTORY, 1900 TO PRESENT.** 4 credits, §Hist 3442, tuition\*: Resident \$344; Non-resident \$997.60.

Migration, repatriation, the Bracero program, contemporary Chicano politics, work, society, and culture. *Meets CLA Cultural Pluralism requirement.* (No prereq. Meets concurrently with Hist 3442)

Fall Qtr, Sec 1, W, 6:20-8:50, BuH 123, Bowman

## Child and Adolescent Psychiatry (CAPy)

(D-697 Mayo: 626-6577)

### Medical School

#### Class materials are provided.

Gerald J. August, Ph.D., Associate Professor  
Michael Bloomquist, Ph.D., Research Psychologist  
Harry M. Hoberman, Ph.D., Assistant Professor

**Workshops**—The following series of workshops is intended to offer in-depth information on assessment and treatment strategies in child and adolescent psychiatry. Please call Workshop Coordinator, Dr. Gerald August, at 626-6577 with questions; or write Box 95 Mayo, University of Minnesota, Harvard Street at East River Road, Minneapolis, MN 55455.

**Please note:** For undergraduate and graduate credit, satisfactory performance on an exam is required. In addition, a relevant paper may be required for graduate credit. If a student does not want academic credit but needs evidence of attendance, registration on an audit basis is suggested. Read about Auditors in the Enrollment Information section of this bulletin (see Index for page number).

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**CAPy 5620 ATTENTION-DEFICIT HYPERACTIVITY DISORDER: DIAGNOSTIC CONSIDERATIONS AND PRACTICAL MANAGEMENT.** 1 credit, tuition\*: Resident \$150; Non-resident \$330; Resident Graduate credit \$150; Non-resident Graduate credit \$330; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Attention-Deficit Hyperactivity Disorder (ADHD) is a leading cause of behavioral and educational problems in children and adolescents. Some children continue to experience symptoms well into their adult years. In this workshop, the problem of Attention Deficit Disorder is thoroughly reviewed, including traditional definitions, theories of causation, and long-term consequences. Various treatment approaches, including parent management and educational intervention, are thoroughly discussed. The role of medication in the overall care of such children is critically reviewed. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Spec Term, ●Sec 1, Sa, Nov. 11, 1995. Late registrations accepted with \$5 late fee from 8 to 8:30 a.m. Workshop runs from 8:30 a.m. to 3:30, MoosT 2-620, August. *No late fee through Nov. 3*

**CAPy 5623 AFFECTIVE DISORDERS AND SUICIDE IN CHILDREN AND ADOLESCENTS: PERSPECTIVES ON PREVALENCE, ETIOLOGY, AND PREVENTION.** 1 credit, tuition\*: Resident \$150; Non-resident \$330; Resident Graduate credit \$150; Non-resident Graduate credit \$330; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Characteristics of depression and suicidal behavior in children and adolescents are reviewed. Methods of crisis intervention, treatment, and prevention are presented. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Spec Term, ●Sec 1, Sa, Sept. 23, 1995. Late registrations accepted with \$5 late fee from 8 to 8:30 a.m. Workshop runs from 8:30 a.m. to 3:30, MoosT 2-620, Hoberman. *No late fee through Sept. 15*

**CAPy 5624 EATING DISORDERS IN CHILDREN AND ADOLESCENTS: MEDICAL AND PSYCHOLOGICAL PERSPECTIVES.** 1 credit, tuition\*: Resident \$150; Non-resident \$330; Resident Graduate credit \$150; Non-resident Graduate credit \$330; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Clinical characteristics of anorexia and bulimia nervosa in children and adolescents are described. Etiological factors are considered and multidimensional treatment approaches are discussed. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Spec Term, ●Sec 1, Sa, Nov. 4, 1995. Late registrations accepted with \$5 late fee from 8 to 8:30 a.m. Workshop runs from 8:30 a.m. to 3:30, MoosT 2-620, Hoberman. *No late fee through Oct. 27*

**CAPy 5627 THE DEVELOPMENT AND TREATMENT OF CHILDHOOD AGGRESSIVE AND ANTISOCIAL BEHAVIOR.** 1 credit, tuition\*: Resident \$150; Non-resident \$330; Resident Graduate credit \$150; Non-resident Graduate credit \$330; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Discussion of the current crisis in the nation regarding the prevalence of violence and crime. Rates of aggressive and antisocial behavior across the age span are presented. An in-depth discussion of the various developmental pathways to serious conduct disorder. Emphasis is given to risk and vulnerability factors associated with the progression of aggressive/antisocial behavior as well as protective factors and resiliency associated with its desistance. A critical review of current theories and methods for the treatment of aggressive and antisocial behavior is included. The role of prevention will be highlighted with a focus on ecological-based models of comprehensive intervention. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Spec Term, ●Sec 1, Sa, Oct. 21, 1995. Late registrations accepted with \$5 late fee from 8 to 8:30 a.m. Workshop runs from 8:30 a.m. to 3:30, MoosT 2-620, Bloomquist. *No late fee through Oct. 13*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**CAPy 5630 PSYCHOTHERAPY IN CHILDREN AND ADOLESCENTS.** 1 credit, tuition\*: Resident \$150; Non-resident \$330; Resident Graduate credit \$150; Non-resident Graduate credit \$330; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Different approaches to psychotherapeutic intervention with children and adolescents are reviewed. Topics covered include short-term dynamic psychotherapy, behavioral therapy, cognitive-behavioral therapy, and family therapy. In addition, the psychotherapy outcome research literature is reviewed. Emphasis on presenting an overview of the major schools of psychotherapy with children. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Spec Term, ⓪Sec 1, Sa, Jan. 13, 1996.

Late registrations accepted with \$5 late fee from 8 to 8:30 a.m. Workshop runs from 8:30 a.m. to 3:30, MoosT 2-620, Bloomquist. *No late fee through Jan. 5*

**CAPy 5632 COMPETENCE ENHANCEMENT TRAINING PROGRAMS FOR CHILDREN WITH DISRUPTIVE BEHAVIOR.** 1 credit, tuition\*: Resident \$150; Non-resident \$330; Resident Graduate credit \$150; Non-resident Graduate credit \$330; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Therapeutic approaches for treating serious behavioral problems in children abound, but few have been shown to have long-term efficacy. This workshop focuses on skill building approaches to the treatment of behavioral, emotional, and academic problems in children. Such approaches teach children to "stop and think," and also teach ways to get children to examine behavioral alternatives. Specific topics covered include environmental engineering, contingency management, self-monitoring and self-instructional training, and problem-solving training. Application of a comprehensive competence enhancement program to the treatment of impulsivity in children with attention deficit disorder is illustrated. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Spec Term, ⓪Sec 1, Sa, Feb. 17, 1996.

Late registrations accepted with \$5 late fee from 8 to 8:30 a.m. Workshop runs from 8:30 a.m. to 3:30, MoosT 2-620, August. *No late fee through Feb. 9*

**CAPy 5633 ANXIETY DISORDERS IN CHILDHOOD AND ADOLESCENCE.** 1 credit, tuition\*: Resident \$150; Non-resident \$330; Resident Graduate credit \$150; Non-resident Graduate credit \$330;

Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Characteristics of the spectrum of anxiety disorders in youth are described. Information on the prevalence and significant characteristics of school phobia, panic attack, separation anxiety, and obsessive-compulsive disorder in children and adolescents is presented. A variety of etiological factors in the development of anxiety disorders is discussed, including biological, social, and psychodynamic influences. Assessment issues and procedures both in the clinic and the community will be reviewed. Various approaches to intervention with children and adolescents with anxiety disorders is described, as well as strategies for prevention of these conditions. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Spec Term, ⓪Sec 1 Sa, Feb. 3, 1996. Late

registrations accepted with \$5 late fee from 8 to 8:30 a.m. Workshop runs from 8:30 a.m. to 3:30, MoosT 2-620, Hoberman. *No late fee through Jan. 26*

**CAPy 5635 COGNITIVE-BEHAVIORAL THERAPY FOR CHILDREN AND ADOLESCENTS.** 1 credit, tuition\*: Resident \$150; Non-resident \$330; Resident Graduate credit \$150; Non-resident Graduate credit \$330; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Cognitive-behavioral therapies include a variety of therapeutic procedures which have the goal of increasing children's ability to control their own behavior and emotions. The theoretical basis and therapy outcome research literature related to cognitive-behavioral therapy will be reviewed. Presentation describes assessment strategies relevant to cognitive-behavioral therapy. Specific cognitive-behavioral procedures geared toward children with externalized behavioral and internalized emotional disorders are discussed. Participants learn about problem-solving techniques, verbal self-instruction training, rational-emotive therapy, attributional retraining, and stress inoculation procedures to applied child populations. Emphasis is placed on methods useful in promoting generalization and maintenance of treatment effects. The presentation also highlights a model for working with families and school systems within the cognitive-behavioral framework. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Spec Term, ⓪Sec 1, Sa, Apr. 20, 1996.

Late registrations accepted with \$5 late fee from 8 to 8:30 a.m. Workshop runs from 8:30 a.m. to 3:30, MoosT 2-620, Bloomquist. *No late fee through Apr. 12*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**CAPy 5636 SCREENING AND ASSESSMENT STRATEGIES FOR CHILDREN WITH DISRUPTIVE BEHAVIORAL DISORDERS.** 1 credit, tuition\*: Resident \$150; Non-resident \$330; Resident Graduate credit \$150; Non-resident Graduate credit \$330; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Begins with a review of specific screening techniques that are employed to identify children and adolescents with disruptive behavioral problems. A functional-based diagnostic assessment model is presented and examples of the application of the approach with ADHD children is provided. The utility of behavior rating scales, structured interview schedules, general abilities tests, and neuropsychological measurement procedures is demonstrated. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Spec Term, ○Sec 1, Sa, Dec. 2, 1995. Late registrations accepted with \$5 late fee from 8 to 8:30 a.m. Workshop runs from 8:30 a.m. to 3:30, MoosT 2-620, August. *No late fee through Nov. 27*

**CAPy 5638 COMMUNITY-BASED PREVENTION FOR CHILDREN WITH SERIOUS BEHAVIORAL AND EMOTIONAL PROBLEMS.** 1 credit, tuition\*: Resident \$150; Non-resident \$330; Resident Graduate credit \$150; Non-resident Graduate credit \$330; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

A framework for the identification of children "at risk" for serious psychopathology and the design of preventive and promotive interventions that may serve to enhance the psychological well-being of children are presented. Child psychopathology is considered from a developmental perspective that includes such topical issues as early experiences and their effects, risk and vulnerability factors, and competence and resiliency in early childhood. Classification and assessment of children's emotional/behavioral problems are covered with an emphasis on those methods that can be used for screening, diagnosis, and prescription. Also presented is a comprehensive model for the design and evaluation of community-based prevention and promotion programs. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Spec Term, ○Sec 1, Sa, Apr. 27, 1995. Late registrations accepted with \$5 late fee from 8 to 8:30 a.m. Workshop runs from 8:30 a.m. to 3:30, MoosT 2-620, August. *No late fee through Apr. 19*

**CAPy 5644 CHILD ABUSE/NEGLECT AND CHILDHOOD PSYCHOPATHOLOGY: IMPLICATIONS FOR ASSESSMENT AND TREATMENT.** 1 credit, tuition\*: Resident \$150; Non-resident \$330; Resident Graduate credit \$150; Non-resident Graduate credit \$330; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Abused or neglected children are at significant risk for developing various forms of childhood psychopathology. Course focuses on a description of various types of child abuse/neglect and highlights the effects of such abuse on children's psychological development. Child, parent/family, and social factors which place children at risk for abuse/neglect are discussed. The presentation describes assessment and intervention approaches for working with abused children and their families. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Spec Term, ○Sec 1, Sa, Nov. 18, 1995. Late registrations accepted with \$5 late fee from 8 to 8:30 a.m. Workshop runs from 8:30 a.m. to 3:30, MoosT 2-620, Bloomquist. *No late fee through Nov. 10*

**CAPy 5645 INNOVATIVE METHODS IN PSYCHOTHERAPY.** 1 credit, tuition\*: Resident \$150; Non-resident \$330; Resident Graduate credit \$150; Non-resident Graduate credit \$330; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Introduction to innovative methods in psychotherapy with children, adolescents, and adults. Creative methods for time-limited treatment are emphasized. Basic principles common to effective psychotherapy are addressed and discussed. Predominant focus on of the workshop is on the following approaches to psychotherapy: short-term psychodynamic therapy, imagery, solution-oriented therapy, experiential therapies (including gestalt therapy), and narrative therapies. These approaches are discussed in terms of their potential use in individual, group, and family therapy. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Spec Term, ○Sec 1, Sa, Mar. 30, 1996. Late registrations accepted with \$5 late fee from 8 to 8:30 a.m. Workshop runs from 8:30 a.m. to 3:30, MoosT 2-620, Hoberman. *No late fee through Mar. 22*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**CAPy 5647 BUILDING FRIENDSHIPS AND PEER RELATIONSHIP SKILLS: INTERVENTIONS FOR SOCIALLY REJECTED CHILDREN.** 1 credit, tuition\*: Resident \$150; Non-resident \$330; Resident Graduate credit \$150; Non-resident Graduate credit \$330; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

One of the most serious developmental impairments experienced by children is peer rejection. Peer rejection is associated with personal feelings of loneliness, low self-esteem, and inadequacy. Long-term outcomes of rejected children include academic failure, antisocial behavior, delinquency, substance abuse, and occupational difficulties. In this class students review the behaviors and mechanisms related to peer rejection. This is followed by a presentation and discussion of various social skills interventions for promoting positive relationships and building meaningful friends. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Spec Term, ●Sec 1, Sa, Mar. 9, 1996.

Late registrations accepted with \$5 late fee from 8 to 8:30 a.m. Workshop runs from 8:30 a.m. to 3:30, MoosT 2-620, August. *No late fee through Feb. 29*

## Child Psychology (CPsy)

(106 Child Development: 624-1891)

**College of Education and Human Development**  
(Institute of Child Development)

Textbooks for most CPsy courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

(See also GC 1284, Behavior Problems of Children; Youth Studies)

Patricia Bauer, Associate Professor, Institute of Child Development

Bruce L. Bobbitt, Psychologist, United Behavioral Systems, Coon Rapids

Judith L. Brown, Psychologist, Minneapolis Public Schools

Elizabeth Carlson, Lecturer, Institute of Child Development

Eric Durbrow, Lecturer

Sue Fust, Lecturer, Institute of Child Development

Seymour Z. Gross, Clinical Associate Professor, Department of Health Care Psychology and Director of Mental Health Services, Pilot City Health Center

Marian Heinrichs, Lecturer, Institute of Child Development

Harry Hoberman, Assistant Professor, Psychiatry  
Michael Maratsos, Professor, Institute of Child Development

Ann Mooney-McLoone, Lecturer, Institute of Child Development

Sherry Muret-Wagstaff, Associate Education Specialist, Pediatrics Department

Maria Sera, Associate Professor, Institute of Child Development

Ruth Thomas, Professor, Vocational and Technical Education and National Center for Research in Vocational Education

James Turnure, Professor, Educational Psychology and Child Psychology

Albert Yonas, Professor, Institute of Child Development

**A major in Child Psychology (CLA) can be completed in the evening, but requires very careful planning.**

Those courses required in the major are offered yearly. Interested students should discuss plans with an adviser (625-2500).

### B.A. Major Sequence

*Required Preparatory Courses:*

Psy 1001 or 5 cr of introductory psychology; CPsy 1301

*Major Requirements:*

3308; Psy 3801 or equiv; 3331 or 5331, 3343, 5329; one course from 5332 or 5336; one course from 5341, 5343, 5345; one course from 5311, 5315, 5319; Senior project: 3960; minimum of 12 additional cr in any 3xxx and 5xxx child psychology courses, which may include 3330, 3980, 5970, 5990 (a total of 4 cr from these courses may be counted toward the major).

### B.S. Major Sequence

*Required Preparatory Courses:*

Psy 1001; CPsy 1301

*Major Requirements:*

12-17 cr to include 3308, Psy 3801, Soc 5821 or EPsy 5240, Soc 3811 or EPsy 5281; 12 cr from 3331 or 5331, 3343, 5329; 8 cr from 3330 or 5330, 5334; 4 cr from 5341, 5343, 5345; 4 cr from 5332, 5336; 8 cr from 5311, 5315, 5319; 4 cr from 3960, senior project; 12 cr from 3xxx or 5xxx CPsy courses, which may include 3980, 5970, 5990 (only 4 cr of each course may be counted toward the major); 22-24 cr from supporting field courses.

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

Areas that may be included are communication disorders, computer science, education, home economics, psychology, public health, social work, sociology. See the advising office, 106 Child Development, for a list of approved courses.

Child Psychology majors may not count Psychology credits toward their 30 (BA) or 6 (BS) credits at 3000- or 5000-level outside their major.

*A minor in Child Psychology (only for CLA students) is also available. Interested students should contact their CLA adviser for information.*

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

**Child Psychology courses not used toward a major may be taken A-F or S-N in CLA.**

**CPsy 1301 INTRODUCTORY CHILD PSYCHOLOGY.** 4 credits, §3309, §5301, tuition\*: Resident \$318; Non-resident \$922.20. (IS)

Introduction to the science of child behavior; review of theories and research. (Prereq 5 cr introductory psychology. Meets concurrently with 3309. A joint Day/Extension class)

Fall Qtr, ●Sec 1, Th, 6:20-8:50 (addn hr arr),  
SciCB 375

Winter Qtr, ●Sec 2, W, 6:20-8:50 (addn hr arr),  
SciCB 125, Fust

Spring Qtr, ●Sec 3, T, 6:20-8:50 (addn hr arr),  
SciCB 125, Bauer

**CPsy 3308 RESEARCH METHODS IN CHILD PSYCHOLOGY.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60.

Techniques used in study of child development; emphasis on collection, organization, and analysis of data. **Must be taken A-F.** (Prereq 1301, Psy 1001. A joint Day/Extension class limited to 10 Extension students)

Fall Qtr, ★●Sec 1, W, 6:20-8:50 (addn hr arr),  
NichH 109, Heinrichs

Winter Qtr, ★●Sec 2, T, 6:20-8:50 (addn hr arr),  
ChDev 216, Heinrichs

Spring Qtr, ★●Sec 3, M, 6:20-8:50 (addn hr arr),  
ChDev 218

**CPsy 3309 INTRODUCTORY CHILD PSYCHOLOGY FOR THE SOCIAL SCIENCES.** 4 credits, §1301, §5301, tuition\*: Resident \$374; Non-resident \$1084.60. (IS)

Science of child behavior; review of theory and research; designed for majors in psychology, sociology, and related disciplines; not suggested for child psychology majors. (Prereq Psy 1001. Meets concurrently with 1301. A joint Day/Extension class)

Fall Qtr, ●Sec 1, Th, 6:20-8:50 (addn hr arr),  
SciCB 375

Winter Qtr, ●Sec 2, W, 6:20-8:50 (addn hr arr),  
SciCB 125, Fust

Spring Qtr, ●Sec 3, T, 6:20-8:50 (addn hr arr),  
SciCB 125, Bauer

**CPsy 3330 DIRECTED EXPERIENCES.** 1-4 credits. 4 credits this offering, §5330, tuition\*: Resident \$374; Non-resident \$1084.60.

Intellectual and/or social development of children, adolescents, or adults as individuals or members of families or peer groups. Options include active participation with an age group or training in research methods, including both experimental and observational techniques. (Prereq 1301 or equivalent. A joint Day/Extension class limited to 10 Extension students)

Spring Qtr, ★●Sec 1, W, 6:20-8:50 (plus 4 addn  
daytime hrs/wk required), ChDev 216, Carlson

**CPsy 3960 SENIOR PROJECT IN CHILD PSYCHOLOGY.** 1-4 credits, tuition\* each credit: Resident \$93.50; Non-resident \$271.15.

A review of the literature in a current topic area of child psychology. Sec 3 is second quarter only. **Must be taken A-F.** (Prereq senior status, #. A joint Day/Extension class)

Fall Qtr, ●Sec 1, Th, 6:20-7:10, NichH 122

Winter Qtr, ●Sec 2, T, 6:20-7:10, ChDev 218

Spring Qtr, ●Sec 3, W, 5:20-6:10, ChDev 105

**CPsy 5302 INFANCY.** 4 credits, §3302, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Perceptual, motor, emotional, social, and cognitive development during the first two years of life; the developing infant in its social and physical environment. (Prereq 1301 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr, ●Sec 1, Th, 6:20-8:50 (addn hr arr),  
BuH 120, Fust

**CPsy 5303 ADOLESCENT PSYCHOLOGY.** 4 credits, §3303, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40. (IS)

Physical, cognitive, and social development during adolescence. (Prereq 5 cr introductory psychology. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr, ●Sec 1, Th, 4:45-7:15, WullH 140,  
Hoberman

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



**CPsy 5305 MULTIDISCIPLINARY PERSPECTIVES ON AGING.** 4 credits, §AdEd 5440, §Educ 5440, §HSU 5009, §PA 5414, §Phar 3009, §PubH 5737, §SAHP 5009, §SW 5024, §Soc 5960, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Multidisciplinary introduction to aging and the aging process. *Students who want graduate credit should register for one of the following: AdEd 5440, CPsy 5305, Nurs 5780, PA 5414, PubH 5737, SW 5024, or Soc 5960. Students who want undergraduate credit should register for Phar 5009 or HSU 5009.* (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with AdEd 5440, HSU 5009, PA 5414, Phar 5009, PubH 5737, SW 5024, Soc 5960. A joint Day/Extension class)  
Fall Qtr, ★Sec 1, MW, 4:40-6:25, MoosT 2-690  
Spring Qtr, ★Sec 2, MW, 4:40-6:25, MoosT 2-690

**CPsy 5311 INTRODUCTION TO DEVELOPMENTAL PSYCHOPATHOLOGY.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Theories and research strategies to investigate origins and course of disordered behavior in childhood and adults, including description, etiology, development. Excluded are problems of physical, sensory, or mental handicaps. (Prereq 1301 or equivalent, 3308 or Psy 1005. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)  
Spring Qtr, ★Sec 1, T, 6:20-8:50 (addn hr arr), EltH N119, Carlson

**CPsy 5313 PSYCHOLOGY OF ATYPICAL CHILDREN.** 4 credits, §3313, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

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 equivalent. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)  
Fall Qtr, ★Sec 1, M, 6:20-8:50, NichH 207, Brown

**CPsy 5315 INTRODUCTION TO MENTAL RETARDATION.** 4 credits, §EPsy 5620, §PsyS 5120, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Psychological and educational problems related to the mentally retarded. (Prereq 1301 or equivalent. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with EPsy 5620. A joint Day/Extension class limited to a combined total of 25 Extension students)  
Winter Qtr, ★Sec 1, W, 4:40-8:30, ChDev 105, Turnure

**CPsy 5319 INTRODUCTION TO CLINICAL CHILD PSYCHOLOGY.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

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. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr, ★Sec 1, Sa, 9 a.m.-12:20, BuH 120, S Gross

**CPsy 5322 MOTOR DEVELOPMENT.** 3 credits, §Kin 5132, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Motor skill development from birth to physical maturity. (Prereq Kin 3132 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)  
Winter Qtr, ★Sec 1, W, 4:15-6:15, CookeH 215, Wade

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.  
\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**CPsy 5329 GENETICS, ETHOLOGY, AND DEVELOPMENT.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Survey of evolutionary theory, behavioral genetics applied to understanding of development of human behavior, formation of species-typical adaptive behavior and individual differences in infancy, childhood, and adolescence. (Prereq 1301 or equivalent. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr, ●Sec 1, TTh, 4:25-5:40, SciCB 125, Maratsos

**CPsy 5330 DIRECTED EXPERIENCES WITH CHILDREN.** 1-4 credits. 4 credits this offering, \$3330, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Intellectual and/or social development of children, adolescents, or adults as individuals or members of families or peer groups. *Focus this offering:* early childhood education. **Must be taken A-F.** (Prereq 1301 or equivalent. For students in post-baccalaureate licensure or graduate programs only. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Fall Qtr, ★●Sec 1, Th, 6:20-8:50 (plus 4 additional daytime hours/week required), ChDev 216, Mooney-McLoone

Winter Qtr, ★●Sec 2, M, 6:20-8:50 (plus 4 additional daytime hours/week required), ChDev 216, Mooney-McLoone

**CPsy 5332 CROSS-CULTURAL CHILD DEVELOPMENT.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Interdisciplinary cross-cultural survey of theories and research on similarities and differences in cognitive, perceptual, socioemotional, and personality development, with emphasis on child-caretaker relations and Asian and Hispanic cultures. (Prereq 4 cr child psych. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr, ●Sec 1, MW, 4-5:30, NichH 213, Durbrow

**CPsy 5334 CHILDREN AND YOUTH IN SOCIETY.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Child development principles relative to social policy decision making; application of theories and findings to such issues as media influences, mainstreaming, day care, child abuse, effects of peers. (Prereq 4 cr child psych. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr, ●Sec 1, M, 4-6:30, WullH 140, Muret-Wagstaff

**CPsy 5336 DEVELOPMENT AND INTERPERSONAL RELATIONS.** 4 credits, \$5339, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Processes and functions of interactions with parents and peers; analysis of theory and research on developmental changes and influences. (Prereq 1301 or equivalent; 3308 or Psy 1005, 3331 or 5331. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Fall Qtr, ★●Sec 1, TTh, 4-5:40, VoTech R285, Thomas

**CPsy 5353 DEVELOPMENT DURING THE SCHOOL YEARS.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Principles of psychological development, emphasizing ages 5-18. Theory and research from developmental psychology relevant to individual growth and achievement; issues in applying a developmental perspective to topics in child and adolescent development (e.g., fostering learning, risk for school failure, behavior and emotional problems, diversity). (Prereq 4 cr psychology. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr, ●Sec 1, TTh, 4-5:30, ScottH 4, Thomas

**Day School Classes**—In addition to the Extension classes listed above, day school classes are sometimes offered to educators during late afternoon, early evening, and weekend hours. For registration information about day school College of Education and Human Development courses, see **page 160** or call 625-6501.

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**Chinese**

(See the Institute of Languages and Literatures)

**Civil Engineering (CE)**

(122 Civil Engineering: 625-5522)

**Institute of Technology**

Textbooks for most CE courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

Paul D. Capel, Adjunct Assistant Professor  
 John J. Connors, Adjunct Assistant Professor  
 Bruce C. Braaten, Lecturer  
 Gary A. Davis, Assistant Professor  
 Emmanuel Detournay, Associate Professor  
 Theodore V. Galambos, Professor  
 John S. Gulliver, Associate Professor  
 Jerome F. Hajjar, Assistant Professor  
 Robert C. Johns, Lecturer  
 Gerald W. Johnson, Associate Professor  
 Walter J. Maier, Professor  
 Mark S. Meyers, Lecturer  
 Panos G. Michalopoulos, Professor  
 David E. Newcomb, Associate Professor  
 Carol K. Shield, Assistant Professor  
 Mark Snyder, Assistant Professor  
 Heinz G. Stefan, Professor  
 Raymond L. Sterling, Associate Professor,  
 Underground Space Center  
 Joel W. Toso, Lecturer  
 P.P. Vaidyaraman, Lecturer

Your attention is called to the Undergraduate Development Certificate in Civil Engineering—90 credits, **page 534**.

For information about the new Solid Waste Management Certificate offered through Continuing Education and Extension/University College, see **page 530**.

Through registration in Extension, students may earn the majority of Civil Engineering credits required for a B.S. in Civil Engineering. See **page 515** for course options. Students may not transfer upper division courses into the C.E. degree program unless they have been admitted to the Institute of Technology and the Upper Division in the Civil Engineering curriculum.

**Joint Day/Extension Classes**—Graduate students may register through Extension for day school and joint Day/Extension classes in Civil Engineering. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**CE 0005 REFRESHER COURSE FOR CIVIL ENGINEERS.** No credit, tuition\*: \$318.

For practicing engineers. Lectures and problem sessions relating to highways, soils, environmental, structural, and hydraulic engineering. **Must be taken S-N.** (Prereq BCE or equivalent degree or completion of Parts I and II of the State Board Examination)

Winter Qtr, Sec 1, T, 6:40-10, CivE 210, Davis, French, Galambos, Gulliver, Hajjar, Johnson, Maier, Snyder, Sterling, Toso

**CE 3050, 3051 ENGINEERING INTERN WORK ASSIGNMENT.** 4 credits each term, tuition\* each term: Resident \$374; Non-resident \$1084.60.

Grades based on formal written report by the student covering his or her work during the six-month professional assignment. **Must be taken S-N.** (Prereq registration in intern program. A joint Day/Extension class)

Fall Spec Term, 3050, **Sec 1, Day and Time arr**  
 Fall Spec Term, 3051, **Sec 1, Day and Time arr**  
 Spring Spec Term, 3050, **Sec 2, Day and Time arr**  
 Spring Spec Term, 3051, **Sec 2, Day and Time arr**

**CE 3300 SOIL MECHANICS.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60.

Index properties and soil classification; compaction. Effective stress. Permeability and seepage. One-dimensional compression. Strength and failure criteria. **Must be taken A-F.** Lectures meet concurrently. (Prereq IT student, AEM 3016. A joint Day/Extension class limited to 10 Extension students)

Winter Qtr, **Sec 1, Lect MW, 4:40-6:35, CivE 212; Lab M, 6:40-8:35, CivE 350, Detournay**  
 Winter Qtr, **Sec 2, Lect MW, 4:40-6:35, CivE 212; Lab T, 9:05-11 a.m., CivE 350, Detournay**  
 Winter Qtr, **Sec 3, Lect MW, 4:40-6:35, CivE 212; Lab W, 2:30-4:25, CivE 350, Detournay**  
 Winter Qtr, **Sec 4, Lect MW, 4:40-6:35, CivE 212; Lab Th, 9:05-11 a.m., CivE 350, Detournay**

**CE 3400 FLUID MECHANICS.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60.

Fluid statics and dynamics for liquids and gases. Kinematics of fluid flow, viscous effects, and introduction to incompressible and compressible duct flow. Boundary layers, lift and drag, fluid measurements. **Must be taken A-F.** (Prereq IT student or ForP major, Math 3261, AEM 1015 or AEM 3016. Limited to 50)

Spring Qtr, **Sec 1, T, 6-10 plus 2 Sa a.m. classes arr, CivE 210, Stefan**

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**CE 5097 ADVANCED DESIGN, ANALYSIS, RESEARCH, OR TUTORIAL IN CIVIL ENGINEERING: HYDRAULIC STRUCTURES.** 2 credits, tuition\*: Resident \$187; Non-resident \$542.30; Resident Graduate credit \$236; Non-resident Graduate credit \$519.20; Resident Graduate School credit \$431; Non-resident Graduate School credit \$948.20.

Design of bank protection works, importance and use of filters; hydraulic design of bridges, causes of failure; intakes and sediment disposal systems, stability of inlets and shorelines, methods of protection, design of breakwaters and jetties; hydraulic modeling; field data collection; environmental impact. (Prereq IT or grad student or #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 30)

Fall Qtr, ★Sec 1, T, 6:40-8:35, CivE 205,  
Vaidyaraman

**CE 5099 ADVANCED DESIGN, ANALYSIS, RESEARCH, OR TUTORIAL IN CIVIL ENGINEERING: SMALL CRAFT HARBORS.** 2 credits, tuition\*: Resident \$187; Non-resident \$542.30; Resident Graduate credit \$236; Non-resident Graduate credit \$519.20; Resident Graduate School credit \$431; Non-resident Graduate School credit \$948.20.

General requirements of small craft harbors, typical layouts, basic design data: waves, wind, currents, storm surge, soil properties; site selection; basic wave concepts, short and long period waves, sedimentation, types of dredges and disposal of sediment, design of breakwaters, types of armor blocks, stability of inlets, shore protection works, importance of filters, field data collection, causes of failure; hydraulic modeling; environmental impact. (Prereq IT or grad student or #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 30)

Spring Qtr, ★Sec 1, W, 6:40-8:35, CivE 202,  
Vaidyaraman

**CE 5200 GEOMETRIC DESIGN OF HIGHWAYS.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Forecast of traffic volume demand; impact of vehicle type on geometric design; vertical and horizontal alignment; intersection design; highway capacity. **Must be taken A-F.** (Prereq IT or grad student, CE 3200. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension students)

Winter Qtr, ★Sec 1, TTh, 4:40-6:35, CivE 210,  
Davis

**CE 5201 HIGHWAY TRAFFIC CHARACTERISTICS AND OPERATIONS.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Characteristics and measurements of volume, speed, density, and travel time; characteristics of vehicles and road users; parking characteristics and design of facilities; applications of signs, signals, and markings in traffic control. **Must be taken A-F.** (Prereq IT or grad student, CE 3200. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension students)

Spring Qtr, ★Sec 1, MW, 4:40-6:35, CivE 212,  
Michalopoulos

**CE 5304 DESIGN OF HIGHWAY AND AIRPORT PAVEMENTS.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Theories of pavement design, flexible and rigid; equivalent wheel loads. Strength tests and frost action. Design procedures for flexible and rigid pavements. (Prereq IT or grad student, CE 3300, CE 5603. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension students)

Spring Qtr, ★Sec 1, MW, 4:40-6:35, CivE 210,  
Newcomb

**CE 5401 WATER RESOURCES ENGINEERING.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Introduction to water resources engineering including flow in conduits, pumps, open channels, and culverts; introduction to flow measurements, hydraulic structures, and systems approach to water resources engineering. **Must be taken A-F.** (Prereq IT or grad student, CE 3400 or #. Qualified students may register for graduate credit at the University of Minnesota Limited to 30)

Spring Qtr, ★Sec 1, MW, 6:40-8:35, CivE 205,  
Toso

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**CE 5506 ENVIRONMENTAL WATER CHEMISTRY.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Composition of natural waters and wastewater, chemical processes affecting distribution of pollutants and water quality parameters in natural waters; methods of evaluation to determine fate of organic pollutants. **Must be taken A-F.** (Prereq IT or grad student, Chem 1006 or #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 50)

Spring Qtr, ★Sec 1, TTh, 4:40-6:35, CivE 212, Capel

**CE 5580 INTRODUCTION TO ENVIRONMENTAL LAW FOR ENGINEERS.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Environmental regulatory law relevant to the work of civil and environmental engineers; specific provisions of federal statutory and regulatory laws such as NEPA, CWA, RCRA, CAA, and CERCLA. (Prereq IT or grad student or #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 35)

Spring Qtr, ★Sec 1, TTh, 6:40-8:35, CivE 205, Braaten

**CE 5600 LINEAR STRUCTURAL SYSTEMS.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60.

Analysis of determinate and indeterminate linear structural systems; analysis of trusses and frames through virtual work, moment distribution, energy methods, and slope-deflection equations. Influence lines. Approximate methods of analysis. Design considerations. **Must be taken A-F.** (Prereq IT upper division or grad student, AEM 3016. May not be taken for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension students)

Fall Qtr, ★Sec 1, MW, 4:40-6:35, CivE 210, Connors

**CE 5610 DESIGN OF METAL STRUCTURES: INTRODUCTION.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60.

Loads on civil structures. Load factor and working stress philosophies of design. Design of tension, compression, and flexural members and their connections. Codes, properties of structural metals. **Must be taken A-F.** (Prereq IT upper division, CE 5600, CE 5603 or ¶CE 5603. May not be taken for

graduate credit at the University of Minnesota. Limited to 50)

Winter Qtr, ★Sec 1, TTh, 6:40-8:35, CivE 210, Connors

**CE 5611 DESIGN OF REINFORCED CONCRETE STRUCTURES.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60.

Principles of strength and serviceability in reinforced concrete structural design. Strength analysis, design of beams, joists, one-way slabs for flexure and shear. Anchorage development, splicing of reinforcement. Stresses at service, deflections, cracking, long-term effects. Introduction to design of columns; continuity; simple footings. **Must be taken A-F.** (Prereq IT upper division, CE 5600, CE 5603 or ¶CE 5603. May not be taken for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension students)

Fall Qtr, ★Sec 1, TTh, 4:40-6:35, CivE 210, Connors

**CE 5612 DESIGN OF METAL STRUCTURES: INTERMEDIATE.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Design of complete metal structures; plate girder bridges, industrial buildings, multistory frames. **Must be taken A-F.** (Prereq IT upper division or grad student, CE 5610. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension students)

Winter Qtr, ★Sec 1, MW, 4:40-6:35, CivE 205, Hajjar

**CE 5701 CEMENTED MATERIAL PROPERTIES: EVALUATION AND MIXTURE DESIGN.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Characteristics and performance evaluation concept of construction materials, properties, and design of cemented mixtures such as concrete, bituminous mixtures, stabilized soils, and rocks. *Lectures meet concurrently.* (Prereq CE 5603. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension students)

Fall Qtr, ★Sec 1, Lect TTh, 4:40-6:35, CivE 205; Lab M, 9:05 a.m.-12:05, CivE 380, Newcomb

Fall Qtr, ★Sec 2, Lect TTh, 4:40-6:35, CivE 205; Lab W, 9:05 a.m.-12:05, CivE 380, Newcomb

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**CE 5702 COMPONENTS, PROPERTIES, AND DESIGN OF PORTLAND CEMENT CONCRETE.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Physical and chemical properties and characteristics of Portland cement, aggregates, and admixtures. Properties and design of concrete mixtures. *Lectures meet concurrently.* (Prereq 5603. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension students)

Winter Qtr, ★●Sec 1, Lect MW, 4:40-6:35, CivE 205; Lab M, 9:05 a.m.-12:05, CivE 380, Newcomb

Winter Qtr, ★●Sec 2, Lect MW, 4:40-6:35, CivE 205; Lab W, 9:05 a.m.-12:05, CivE 380, Newcomb

**CE 5703 PROJECT MANAGEMENT.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Broad, practical examination of construction project management including project planning, budgeting, scheduling, staffing, task and cost control, and communicating with, motivating, and managing team members. (Prereq senior standing, IT major. Qualified students may register for graduate credit at the University of Minnesota. Limited to 50)

Fall Qtr, ★Sec 1, W, 6:40-10, CivE 205, Johns

## Classical and Near Eastern Studies

(330 Folwell Hall: 625-5353)

### College of Liberal Arts

Textbooks for most Classical and Near Eastern Studies courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

(See also Art History; Foreign Study; History; Religious Studies; and *Social Sciences, Public Issues, and Humanities* in Compleat Scholar noncredit section)

Frederick A. Cooper, Professor  
Stephen Feinstein, Visiting Professor  
Jackson Hershbell, Professor  
Sheila McNally, Professor

Daniel Reisman, Associate Professor  
George Sheets, Associate Professor  
Robert P. Sonkowsky, Professor  
Soterios Stavrou, Adjunct Instructor  
Theofanis Stavrou, Professor

**Read about language laboratories on page 485.**

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Classical and Near Eastern Studies. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**Continuing Education for Women (CEW) sections available in the following courses:** Clas 1042, 3142

## Ancient Near Eastern Studies (ANE)

**ANE 3251 THE MODERN STUDY OF THE OLD TESTAMENT.** 4 credits, §RelA 3251, §RelS 3251, tuition\*: Resident \$344; Non-resident \$997.60.

Methods used in studying the Old Testament, including textual criticism, the anthropological approach, form criticism, the sociological approach, the history of religion, and the uses of archaeology in interpreting the text. (No prereq. Meets concurrently with RelS 3251)

Spring Qtr, Sec 1, T, 6:20-8:50, FolH 208, Reisman  
(See also CSch 0358, Ancient Mysteries of the Bible)

**ANE 3505 ANCIENT ISRAEL: THE HELLENISTIC PERIOD.** 4 credits, §5505, §RelA 3505, 5505, RelS 3505, 5505, tuition\*: Resident \$344; Non-resident \$997.60.

Period of Ezra and Nehemiah, Samaritans, apocalyptic and other eschatological types; the Maccabean period; Sadducees, Pharisees, Zealots, Christians, Qumran, wisdom literature; Philo, Josephus; Jewish rights during Roman empire. Evaluation of sources for historical reliability. Knowledge of Hebrew not required. (No prereq. Meets concurrently with RelS 3505)

Spring Qtr, Sec 1, M, 6:20-8:50, FolH 208

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

Classics (Clas)

**NOTE**—Classics (Clas) courses require no knowledge of Latin or Greek.

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

**Clas 1042 GREEK AND ROMAN MYTHOLOGY.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

The heroes, gods, and goddesses of ancient Greece and Rome. The stories of the myths and the stories behind the myths. (No prereq)

Fall Qtr, Sec 1, M, 6:20-8:50, FolH 312, Hershbell

Winter Qtr, Sec 2, W, 1:15-4, MacP, Hershbell.  
*Offered through Continuing Education for Women*

**Clas 3008 HISTORY OF ANCIENT ART.** 4 credits, \$ArH 3008, tuition\* (includes \$5 course fee): Resident \$349; Non-resident \$1002.60.

Architecture, sculpture, and painting of selected early cultures; stress on influences contributing to the development of Western art. (No prereq. Meets concurrently with ARH 3008)

Fall Qtr, Sec 1, W, 6:20-8:50, FolH 306, Cooper

**Clas 3072 THE NEW TESTAMENT.** 4 credits, \$5072, \$ReIS 3072, 5072, tuition\*: Resident \$344; Non-resident \$997.60.

First century Israel under Roman rule. Jesus of Nazareth. Earliest Christian communities. Jewish Christianity. Mission to Gentiles. Paul the apostle. Beginnings of the New Testament. (No prereq. Meets concurrently with ReIS 3072)

Spring Qtr, Sec 1, Th, 6:20-8:50, FolH 306

**Clas 3142 ART OF EGYPT.** 4 credits, \$ArH 3142, tuition\* (includes \$5 course fee): Resident \$349; Non-resident \$1002.60.

The arts and architecture of Egypt from Prehistoric times to the emergence of modern Egypt, with stress on the elements of continuity and of change that have shaped Egyptian culture. (No prereq. Meets concurrently with ARH 3142)

Spring Qtr, Sec 1, W, 1:30-4, Mpls Institute of Arts, Auditorium, 2400 S 3 Ave, McNally. *Offered through Continuing Education for Women*

Greek (Grk)

**Grk 1101-1102-1103 BEGINNING CLASSICAL GREEK: INDIVIDUALLY PACED.** 5 credits each quarter, tuition each quarter\*: Resident \$397.50; Non-resident \$1152.75. (IS 1101)

Emphasis on developing reading ability and on reading real Greek as soon as possible. Students

proceed at their own pace through a course of graded reading materials keyed to an accompanying grammar. Readings include selections from Plato, Aristophanes, Euripides, Demosthenes, Herodotus, and Homer. Class is divided into study groups which meet concurrently. Students in the study groups are encouraged to interact with each other and with the instructor in an informal and mutually supportive way. Examinations are taken when the student feels ready. *Courses meet concurrently each term.* (No prereq for 1101; 1101 or equiv for 1102; 1102 or equiv for 1103)

Fall Qtr, Sec 1, W, 6:20-8:50, FolH 218, 134, 208, Sheets

Winter Qtr, Sec 2, W, 6:20-8:50, FolH 218, 326, 344, Sheets

Spring Qtr, Sec 3, W, 6:20-8:50, FolH 218, 114, JonesH 4, Sheets

Greek, Modern (MdGk)

**MdGk 1101-1102-1103 BEGINNING MODERN GREEK.** 5 credits each quarter, \$FSSP 3001-3002-3003, tuition each quarter\*: Resident \$397.50; Non-resident \$1152.75.

Speaking and reading demotic Greek. Pattern-practice drill, simple readings, some grammar. (No prereq for 1101; 1101 or equiv for 1102; 1102 or equiv for 1103. Meets concurrently with FSSP 3001-3002-3003)

Fall Qtr, 1101, Sec 1, Th, 6:20-8:50, BlegH 245, T Stavrou

Winter Qtr, 1102, Sec 1, Th, 6:20-8:50, BlegH 105, T Stavrou

Spring Qtr, 1103, Sec 1, Th, 6:20-8:50, BlegH 245, T Stavrou

**MdGk 1104-1105-1106 INTERMEDIATE MODERN GREEK.** 5 credits each quarter, \$FSSP 3004-3005-3006, tuition each quarter\*: Resident \$397.50; Non-resident \$1152.75.

A review of the fundamentals of syntax through a variety of readings from Modern Greek prose writers and poets. Provides additional grammatical elements which are reinforced through reading, conversation, and composition. *There must be 10 or more students enrolled in order for a section to be held.* (Prereq 1103 or equiv for 1104; 1104 or equiv for 1105; 1105 or equiv for 1106. Meets concurrently with FSSP 3004-3005-3006)

Fall Qtr, 1104, Sec 1, M, 6:20-8:50, SocSci 1383, S Stavrou

Winter Qtr, 1105, Sec 1, M, 6:20-8:50, SocSci 1383, S Stavrou

Spring Qtr, 1106, Sec 1, M, 6:20-8:50, SocSci 1383, S Stavrou

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

### Hebrew (Hebr)

**Hebr 1101-1102-1103 BEGINNING HEBREW.** 5 credits each quarter, tuition each quarter\*: Resident \$397.50; Non-resident \$1152.75.

*Course intended for beginners.* Speaking, reading, and writing modern Hebrew. Aural comprehension, pronunciation, basic grammar, biblical syntax. Emphasizes authentic communication in modern Hebrew. Cultural aspects of Judaism and contemporary Israeli life are included. Provides a foundation which enables transitions to biblical materials. *There must be 10 or more students enrolled in order for a section to be held.* (No prereq for 1101; 1101 or equivalent for 1102; 1102 or equivalent for 1103. Limited to 30)

Fall Qtr, 1101, ★Sec 1, TTh, 6:10-8:15, BethEl Synagogue, 5224 W 26 St, St. Louis Park (Hwy 100 & 26 St.)

Winter Qtr, 1102, ★Sec 1, TTh, 6:10-8:15, Arr  
Spring Qtr, 1103, ★Sec 1, TTh, 6:10-8:15, Arr

### Jewish Studies (JwSt)

**JwSt 1034 INTRODUCTION TO JUDAISM.** 4 credits, §3034, §ReIS 1034, 3034, tuition\*: Resident \$318; Non-resident \$922.20.

Concepts, movements, and institutions in the development of classical Judaism, as manifested in the literature and festivals of the Jewish people from Second Commonwealth times to the present. (No prereq. Meets concurrently with 3034, ReIS 1034, 3034)

Winter Qtr, Sec 1, M, 6:20-8:50, FolH 218

**JwSt 3034 INTRODUCTION TO JUDAISM.** 4 credits, §1034, §ReIS 1034, 3034, tuition\*: Resident \$344; Non-resident \$997.60. (IS)

See course description for JwSt 1034. (No prereq. Meets concurrently with 1034, ReIS 1034, 3034)

Winter Qtr, Sec 1, M, 6:20-8:50, FolH 218

**JwSt 3521 THE HOLOCAUST.** 4 credits, §ReIS 3541, tuition\*: Resident \$344; Non-resident \$997.60. (IS)

Nazi destruction of Jewish life in Europe, 1933-45. Historical, social background of European Jewish communities. Anti-Semitism and Nazism. Ghettos under Nazi rule; social and cultural organization, government. Nazi terror and destruction; Jewish resistance; historical consequences. (No prereq. Meets concurrently with ReIS 3541)

Fall Qtr, Sec 1, M, 6:20-8:50, FolH 148, Feinstein

### Latin (Lat)

**NOTE**—Lat 1101 requires no previous knowledge of Latin.

**Lat 1101-1102-1103 LATIN.** 5 credits each quarter, tuition each quarter\*: Resident \$397.50; Non-resident \$1152.75. (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 discussions motivate learning, provide community, and explore humanistic educational dimensions of Classical Latin traditions. Students are divided into study groups, which meet one hour each week; the hour is arranged between 6:05 and 9:05 p.m. Mondays. The entire class will meet from 6:05 to 7:05 p.m. the first class each term, new students in 240, returning students in 246 FolH. *Courses meet concurrently each term and with 1104.* (No prereq for 1101; 1101 or # for 1102; 1102 or # for 1103)

Fall Qtr, 1101, Sec 1, M, FolH 234, 246, 318, Sonkowsky

Fall Qtr, 1102, Sec 1, M, FolH 234, 246, 318, Sonkowsky

Fall Qtr, 1103, Sec 1, M, FolH 234, 246, 318, Sonkowsky

Winter Qtr, 1101, Sec 2, M, FolH 234, 246, 326, Sonkowsky

Winter Qtr, 1102, Sec 2, M, FolH 234, 246, 326, Sonkowsky

Winter Qtr, 1103, Sec 2, M, FolH 234, 246, 326, Sonkowsky

Spring Qtr, 1101, Sec 3, M, FolH 218, 246, 318, Sonkowsky

Spring Qtr, 1102, Sec 3, M, FolH 218, 246, 318, Sonkowsky

Spring Qtr, 1103, Sec 3, M, FolH 218, 246, 318, Sonkowsky

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



**Lat 1101-1102-1103 LATIN.** 5 credits each quarter, tuition each quarter\*: Resident \$397.50; Non-resident \$1152.75.

*Each of the following sections is offered via interactive television between two sites, with students at both locations.* Basic grammar and vocabulary, practice in reading and writing Latin, workbook exercises, easy Latin readings and Roman legends. Weekly class sessions motivate learning, provide community, and explore humanistic dimensions of classical Latin traditions. Text materials permit self-pacing, but students will complete an assigned body of materials each quarter. 1103 will include a review of learned elements with a shift of emphasis to longer passages of continuous reading. (No prereq for 1101; 1101 or # for 1102; 1102 or # for 1103)  
 Fall Qtr, 1101, Sec 4, MW, 3-4, RarigC, 5th floor, Studio C, Sonkowsky  
 Winter Qtr, 1102, Sec 4, MW, 3-4, RarigC, 5th floor, Studio C, Sonkowsky  
 Spring Qtr, 1103, Sec 4, MW, 3-4, RarigC, 5th floor, Studio C, Sonkowsky

**Lat 1104 LATIN READINGS: CAESAR.** 5 credits, tuition\*: Resident \$397.50; Non-resident \$1152.75. (IS)

Reading in Book I of Julius Caesar's masterpiece *The Gallic Wars*. Weekly one-hour study groups on Tuesdays arranged between 6:05 and 9:05 p.m. The entire class will meet from 6:05 to 7:05 p.m. the first class each term. Meets concurrently with 1101-1102-1103. (Prereq 1103 or #)  
 Fall Qtr, Sec 1, M, FolH 234, 246, 318, Sonkowsky  
 Winter Qtr, Sec 2, M, FolH 234, 246, 326, Sonkowsky  
 Spring Qtr, Sec 3, M, FolH 218, 246, 318, Sonkowsky

## Clinical Laboratory Science (CLS)

(D-242 Mayo: 625-9171)

### Medical School

(See also Public Health)

Textbooks for most CLS courses are available at University of Minnesota Bookstore—Health Sciences (625-1500).

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Clinical Laboratory Science. For a copy of the current daytime Class

Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

*No CLS courses offered through Extension Classes 1995-96*

## Communication Disorders (CDis)

(115 Shevlin Hall: 624-3322)

### College of Liberal Arts

Textbooks for most CDIs courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

Patricia A. Broen, Professor  
 Robert H. Brookshire, Professor  
 Arlene E. Carney, Associate Professor  
 Julia M. Davis, Professor  
 Karlind T. Moller, Professor of Human and Oral Genetics and Communication Disorders  
 Joe E. Reichle, Professor  
 Clark D. Starr, Professor  
 Diana J. van Deusen, Assistant Clinical Specialist

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in CDIs. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**CDIs 5504 NORMAL AND DISORDERED CHILD PHONOLOGY.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Theory and research relating to normal and disordered phonological development. Emphasis on assessment and treatment of phonological disorders. (Prereq 5302, 5303 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)  
 Spring Qtr, ●Sec 1, MW, 4:40-6:35, FolH 340, Broen

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**CDIs 5507 CLEFT PALATE, ORAL-FACIAL ANOMALIES AND SPEECH.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Relationships between oral-facial structures and speech. Emphasis on speech problems associated with dental and palatal anomalies and on their clinical management. Observations of clinical activities. (Prereq 5304, 5504 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, ●Sec 1, MW, 4:15-6, FolH 340, Starr, Moller

**CDIs 5509 MOTOR SPEECH DISORDERS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Nature, assessment, and treatment of motor speech disorders in adult and pediatric populations. (Prereq 5304 or ¶5304. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr, ●Sec 1, Th, 4:40-7:40 (plus 1 hr arr), FolH 340

**CDIs 5606 LANGUAGE ASSESSMENT, INTERVENTION—EARLY STAGES.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Analysis of the communication disorders in preschool age children with special emphasis on the assessment and management of language disorders observed in children with developmental disabilities as well as intellectually normal children. (Prereq 5305 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr, ●Sec 1, M, 4:40-7:40 (plus 1 hr arr), FolH 50, Reichle

**CDIs 5608 LANGUAGE ASSESSMENT, INTERVENTION—ADULTS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Analysis of language disorders in adolescent and adult populations with special emphasis on assessment and intervention strategies applicable to aphasia and other neurogenic disorders. (Prereq 5302 or

#. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr, ●Sec 1, TTh, 5-6:45, FolH 340, Brookshire

**CDIs 5611 AUGMENTATIVE SYSTEMS OF COMMUNICATION.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Review of equipment and instructional procedures used to establish communication board and signing skills in severely handicapped populations. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, ●Sec 1, T, 3:35-6:35 (plus 1 hr arr), WullH 140, Reichle

**CDIs 5900 TOPICS IN COMMUNICATION DISORDERS: AURAL HABILITATION IN CHILDREN: Focus on Early Intervention.** 3 credits, tuition\*: Resident \$258; Non-resident \$748.20; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Early intervention for infants and preschoolers with hearing losses ranging from mild through profound ranges. Topics will include choice of communication modality, working with parents, infant vocalizations and early speech production, designing parent-infant and preschool programs, and integrating auditory, speech, and language skills into home and classroom settings. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, ●Sec 1, M, 4:30-7:30, ShevH 125, Carney

**CDIs 5900 TOPICS IN COMMUNICATION DISORDERS: COUNSELING IN COMMUNICATION DISORDERS.** 3 credits, tuition\*: Resident \$258; Non-resident \$748.20; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Explores counseling issues and techniques appropriate to persons with communication disorders and their families. Videotaped and live vignettes of speech and hearing counseling sessions will be used to demonstrate counseling techniques and pitfalls. Students will practice techniques learned in class by engaging in small group role-plays. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, ●Sec 2, Th, 3:35-6:35, FolH 340, Davis, van Deusen

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**CDIs 5900 TOPICS IN COMMUNICATION DISORDERS: COMMUNICATIVE APPROACHES TO CHALLENGING BEHAVIOR IN PERSONS WITH SEVERE DEVELOPMENTAL DISABILITIES.** 3 credits, tuition\*: Resident \$258; Non-resident \$748.20; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Designed to identify and critique best practices that provide positive treatment alternatives for individuals who engage in socially motivated aggression, self injury, tantrumming, and other forms of challenging behavior. A large proportion of instructional procedures addressed in this course will focus on establishing more efficient communicative repertoires that serve the same function as existing challenging behaviors. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class) Spring Qtr, ●Sec 3, F, 3:35-6:35, BuH 123, Reichle

### Comparative Studies in Discourse and Society (CSDS)

See Cultural Studies and Comparative Literature.

### Compleat Scholar

(See page 397)

## Composition and Communication (Comp)

(306 Lind Hall: 625-2888)

### College of Liberal Arts

Textbooks for most Comp courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000). See textbook note below.

(See also English; General College; Rhetoric; and *Writing and Literature* in Compleat Scholar non-credit section)

**Composition Requirements for Degree Programs:** Since September 1982, the College of Liberal Arts and most other colleges of the University have required all students to satisfy the Writing Practice requirement and take one or more upper division courses (Comp 30xx) in their junior or senior year.

**Refresher courses:** Students who feel the need for a refresher course before enrolling in Comp 1011 are encouraged to take courses from the General College if they feel their background in structure or grammar is insufficient, or American Studies 1001, 1002, 1003, American Life, if they feel their reading background has been neglected. Rhetoric 1160, College Reading, and LASK 1001, Becoming a Master Student, may also be useful.

**Transfer and continuing students:** Students who have passed one or more composition courses at another university may be exempt from the Writing Practice requirement. They should contact the Continuing Education and Extension/University College Counseling Office, 314 Nolte Center, 625-2500, for information as to their proper choice of courses.

Students who have passed Comp 1001 and Comp 1002, or Comm 1001 and Comm 1002 under previously existing requirements are probably exempt from further lower division composition courses unless their major department had an additional requirement when they began work at the University.

Continuing students who have passed Comp 1001 or Comm 1001, but not the second course, should either take Comp 1027 or an appropriate upper level (3xxx) course to complete their requirement.

**International students:** Students whose native language is not English should go to Klaeber Court 175 for information; contact Sheryl Holt, Coordinator of Composition for Non-Native Speakers of English, 624-4524.

**Exemptions:** Students with exceptionally high skills in English may earn exemption from the Writing Practice requirement. Students interested in this alternative should contact CEE Counseling, 314 Nolte Center, 625-2500.

**ATTENDANCE**—Students absent from the first day of classes in any Composition course may lose their place in the course unless they have contacted their instructor prior to the first class meeting.

**REGISTRATION AFTER FIRST CLASS MEETING**—Students who wish to register in a Comp course that has already met must secure the written permission of the instructor in order to register. Students who register without securing written permission may be canceled from the class without notice.

**Textbooks:** Because different instructors require different texts, even for different sections of the same course, students should attend class before buying books for Composition courses.

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Note**—Comp 0002C (Grammar and Usage Review), 0003C (Review of Business English), 0004C (Business Correspondence), and 0006C (Basic Technical Writing) are no longer being offered through Composition and Communication. Students interested in noncredit introductory writing courses should see the Communication Skills listing of the General College section of this Bulletin, **page 216**.

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Composition and Communication. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**Continuing Education for Women (CEW) sections available in the following course:** Comp 1011

**Computer-assisted Comp sections**—Certain sections of Comp 3031 and 3032 make use of computer-assisted instruction; there is no additional charge for these courses. These sections are identified with each course.

Computer laboratories are located in 26 Lind Hall, where there are both IBM and Macintosh computers. Instruction in the lab during class hours involves drafting, revising, and special exercises. Previous word processing and typing experience is not essential.

**Comp 1011 WRITING PRACTICE I.** 5 credits, tuition\*: Resident \$397.50; Non-resident \$1152.75. (IS)

Provides guided practice in solving writers' problems through recitation, in-class workshops, and individual conferences. Writing assignments focus on defining purpose, organizing and developing content, analyzing audiences, drafting the whole essay and its parts, and revising and editing so as to master the fundamentals of expository structure and style. After first day of class, consent of instructor is required. (No prereq. Limited to 25)

*The Writing Practice requirement is fulfilled by successful completion of Comp 1011. Students whose work does not meet an acceptable standard in 1011 will receive a continuation grade ("X"), and will take Comp 1013 to complete the requirement.*

**Minneapolis Campus (Including MacPhail Center)**

Fall Qtr, ★Sec 1, M, 6:20-9:10, LindH 340

Fall Qtr, ★Sec 2, T, 6:20-9:10, LindH 340

Fall Qtr, ★Sec 3, T, 6:20-9:10, AmundH 124

Fall Qtr, ★Sec 4, W, 6:20-9:10, AmundH 156

Fall Qtr, ★Sec 5, Th, 9-11:50 a.m., MacP.

*Offered through Continuing Education for Women*

Fall Qtr, ★Sec 6, Th, 6:20-9:10, LindH 315

Fall Qtr, ★Sec 7, Th, 6:20-9:10, LindH 320

Winter Qtr, ★Sec 8, M, 6:20-9:10, LindH 315

Winter Qtr, ★Sec 9, T, 6:20-9:10, AmundH 120

Winter Qtr, ★Sec 10, T, 6:20-9:10, AmundH 124

Winter Qtr, ★Sec 11, W, 6:20-9:10, AmundH 124

Winter Qtr, ★Sec 12, Th, 6:20-9:10, AmundH 116

Spring Qtr, ★Sec 13, M, 6:20-9:10, LindH 303

Spring Qtr, ★Sec 14, M, 6:20-9:10, LindH 315

Spring Qtr, ★Sec 15, T, 6:20-9:10, LindH 315

Spring Qtr, ★Sec 16, T, 6:20-9:10, LindH 303

Spring Qtr, ★Sec 17, W, 1-3:50, Fairview Comm Ctr, 1910 W Cty Rd B, Roseville. *Offered through Continuing Education for Women*

**Roseville Area High School**

Spring Qtr, ★Sec 18, W, 6:20-9:10, room 143

**Richfield High School**

Fall Qtr, ★Sec 19, W, 6:20-9:10, room 241

**Comp 1013 WRITING PRACTICE II.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

*Designed for students who have recently completed Comp 1011. Intensive work on individual writing problems. Highly individualized workshops and conferences. Students who need this course must contact the Composition office (625-2888) before registering. (Prereq grade of X in 1011. A joint Day/Extension class limited to 18 Extension students)*

Fall Qtr, ★Sec 1, Arr

Winter Qtr, ★Sec 2, Arr

Spring Qtr, ★Sec 3, Arr

**Comp 1027 INTERMEDIATE EXPOSITORY WRITING.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Focuses on the range of choices writers make based on audience, purpose, and context. Relies on critical reading and a variety of written assignments to improve students' control over their writing and the effect it will have on their intended audiences. (Prereq completion of the Writing Practice requirement, or Comp 1001 or Comm 1001; sophomore standing is recommended. Limited to 25)

Fall Qtr, ★Sec 1, W, 6:20-8:50, LindH 303

Winter Qtr, ★Sec 2, T, 6:20-8:50, LindH 303

Spring Qtr, ★Sec 3, W, 6:20-8:50, LindH 315

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**Comp 3011-3033 Upper Division Writing Courses**—Completion of one of these courses (4 cr) (with the exception of Comp 3022) fulfills the "upper division composition requirement" as defined by the student's major department. Some colleges or departments require more than one upper division course. Completion of the Writing Practice requirement or its equivalent is prerequisite for all of these courses. Students should have declared a major, and are advised not to take the course until they have completed 90 credits (with the exception of Comp 3022 and 3033, which require 60 or more credits). The Composition Office has a list of which courses are required or recommended for each degree program.

**Comp 3011 WRITING ABOUT LITERATURE.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60. (IS)

Primary focus on presenting the active reading of literary works (poems, plays, fiction) in literary commentary and criticism, primarily for academic audience. Use of secondary sources, and attention to various theoretical and critical approaches. (Prereq the Writing Practice requirement or equivalent. Limited to 20)

Fall Qtr, ★Sec 1, W, 6:20-8:50, LindH 320

**Comp 3012 WRITING IN THE HUMANITIES.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60. (IS)

Writing on topics where historical and multicultural perspectives are brought together in the context of these disciplines. Assignments involve integrating primary texts with critical commentary. Frequent practice in presenting primary materials through paraphrase and summary. (Prereq the Writing Practice requirement or equivalent. Limited to 20)

Spring Qtr, ★Sec 1, T, 6:20-8:50, KoltH S135

**Comp 3013 WRITING FOR THE ARTS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60. (IS)

Writing in the roles of artist, member of the audience, and critic to balance subjective responses and academic analysis. Emphasis on the importance of writing to create and maintain the arts communities through grants, reviews, and formal criticism. (Prereq the Writing Practice requirement or equivalent. Limited to 20)

Winter Qtr, ★Sec 1, Th, 6:20-8:50, LindH 325

Spring Qtr, ★Sec 2, Th, 6:20-8:50, LindH 340

**Comp 3014 WRITING IN THE SOCIAL SCIENCES.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60. (IS)

Emphasizes writing as a way to communicate knowledge about individual and collective human behavior. Multidisciplinary perspectives on common social issues, description and analysis of quantitative data. Assignments may include the literature review, research proposal, case study, and theoretical argument. (Prereq the Writing Practice requirement or equivalent. Limited to 20)

Fall Qtr, ★Sec 1, M, 6:20-8:50, LindH 320

Fall Qtr, ★Sec 2, M, 6:20-8:50, LindH 303

Fall Qtr, ★Sec 3, W, 6:20-8:50, LindH 315

Fall Qtr, ★Sec 4, Th, 6:20-8:50, LindH 325

Winter Qtr, ★Sec 5, T, 6:20-8:50, LindH 320

Winter Qtr, ★Sec 6, T, 6:20-8:50, LindH 315

Winter Qtr, ★Sec 7, W, 6:20-8:50, LindH 315

Winter Qtr, ★Sec 8, Th, 6:20-8:50, LindH 315

Spring Qtr, ★Sec 9, M, 6:20-8:50, LindH 320

Spring Qtr, ★Sec 10, Th, 6:20-8:50, LindH 315

Spring Qtr, ★Sec 11, Th, 6:20-8:50, LindH 303

**Comp 3015 WRITING ABOUT SCIENCE.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60. (IS)

Emphasizes awareness of the close connection between writing and the practice of science. Through descriptive papers, scientific papers, grant proposals, literature reviews, response papers and other projects, students will learn how language functions in a variety of scientific contexts. (Prereq the Writing Practice requirement or equivalent. Limited to 20)

Spring Qtr, ★Sec 1, M, 6:20-8:50, MurH 308

**Comp 3022 CRITICAL READING AND WRITING FOR MANAGEMENT.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60. (IS)

Strategies and conventions for writing in management and related fields. Improvement of communication skills through the incorporation of narrative, descriptive, analytical and persuasive techniques into writing on current business topics, with an emphasis on critical reading, thinking, and writing. Strategies for communicating among varied audiences in business settings. *This course is the first of two courses required by the Carlson School of Management. It does not fulfill the upper-division composition requirement as defined by most majors in the College of Liberal Arts.* (Prereq the Writing Practice requirement or equivalent. Limited to 20)

Fall Qtr, ★Sec 1, T, 6:20-8:50, LindH 325

Winter Qtr, ★Sec 2, W, 6:20-8:50, LindH 340

Spring Qtr, ★Sec 3, Th, 6:20-8:50, KoltH S137

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Comp 3027 ADVANCED EXPOSITORY WRITING.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Designed for already competent writers, this course focuses on the production of polished writing within and beyond the university setting. Teaches effective argumentation through critical reading and awareness of context and audience. (Prereq the Writing Practice requirement or equivalent. Limited to 20)

Fall Qtr, ★Sec 1, T, 6:20-8:50, LindH 303

Fall Qtr, ★Sec 2, T, 6:20-8:50, LindH 229

Winter Qtr, ★Sec 3, Th, 6:20-8:50, LindH 303

Winter Qtr, ★Sec 4, Th, 6:20-8:50, LindH 340

Spring Qtr, ★Sec 5, M, 6:20-8:50, KoltH S137

Spring Qtr, ★Sec 6, M, 6:20-8:50, KoltH S138

**Comp 3031 TECHNICAL WRITING FOR ENGINEERS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60. (IS)

Presenting technical information accurately and clearly with attention to the rhetorical and organizational contexts of the writing. Analysis of writing situations, style and form of technical reports, and collaborative written and spoken presentations. (Prereq the Writing Practice requirement or equivalent. Limited to 20)

Fall Qtr, ★Sec 1, M, 6:20-8:50, LindH 315

Fall Qtr, ★Sec 2, T, 6:20-8:50, KoltH S133

Winter Qtr, ★Sec 3, T, 6:20-8:50, LindH 325

(computer-assisted section)

Winter Qtr, ★Sec 4, W, 6:20-8:50, LindH 325

Spring Qtr, ★Sec 5, T, 6:20-8:50, KoltH S133

Spring Qtr, ★Sec 6, T, 6:20-8:50, KoltH S134

Spring Qtr, ★Sec 7, Th, 6:20-8:50, LindH 325

(computer-assisted section)

**Comp 3032 PRE-PROFESSIONAL WRITING FOR BUSINESS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60. (IS)

Writing for the wide variety of situations and audiences found in business. Form and style of business writing in collaborative and individual assignments. Assignments and practical examples tied as much as possible to students' major fields. This is the second of two courses required by the Carlson School of Management. (Prereq the Writing Practice requirement or equivalent. Limited to 20)

Fall Qtr, ★Sec 1, W, 6:20-8:50, LindH 325

(computer-assisted section)

Winter Qtr, ★Sec 2, M, 6:20-8:50, RarigC 616

Winter Qtr, ★Sec 3, M, 6:20-8:50, LindH 340

(computer-assisted section)

Spring Qtr, ★Sec 4, M, 6:20-8:50, KoltH S139

Spring Qtr, ★Sec 5, W, 6:20-8:50, RarigC 610

(See related courses in General College; and Rhetoric)

**Comp 3033 WRITING FOR THE HEALTH SCIENCES.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Addresses the writing needs of students from the diverse fields of the Health Sciences. Primary emphasis on practicing and achieving verbal clarity in a variety of situations ranging from precise description of a clinical procedure to balanced discussion of ethical contexts. (Prereq the Writing Practice requirement or equivalent. Limited to 20)

Fall Qtr, ★Sec 1, Th, 6:20-8:50, LindH 340

Winter Qtr, ★Sec 2, W, 6:20-8:50, LindH 303

Spring Qtr, ★Sec 3, W, 6:20-8:50, LindH 303

Spring Qtr, ★Sec 4, W, 6:20-8:50, LindH 325

**Comp 3050 SPECIAL TOPICS IN ADVANCED COMPOSITION: WRITING IN PROFESSIONAL CONTEXTS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

For students who are actively working in professional or business settings, this course will focus on strategies for understanding the functions and conventions of writing in diverse professional settings, including corporations, businesses, and social agencies. Preference given to students enrolled in the YMCA Metro Internship Program and other University of Minnesota internships. Interested students can contact the Composition Office in 306 Lind Hall or telephone (612) 625-2888 for more details and to receive permission to register. (Prereq the Writing Practice requirement or equivalent and written #. Limited to 20)

Spring Qtr, ★Sec 1, W, 6:20-8:50, LindH 320

**Comp 3085 CONFERENCE COURSE IN ADVANCED COMPOSITION.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Provides detailed guidance to students who are working on large writing projects such as major senior papers, SPAN theses, and summa theses. Organized as a workshop, with occasional short presentations on organization, academic forms, and rhetorical concerns relevant to all students' projects. Individual and group work provide students with tailored advice as they draft and revise their papers. The goal will be to produce a final draft of the project by the end of the term. Interested students must contact the Composition Office (306 Lind Hall, 625-2888), and submit a brief written outline of the project in order to be approved for registration. Not all proposals will be approved. (Prereq the Writing Practice requirement or equivalent and written #. Limited to 20)

Fall Qtr, ★Sec 1, M, 6:20-8:50, LindH 302

Winter Qtr, ★Sec 2, T, 6:20-8:50, LindH 340

Spring Qtr, ★Sec 3, T, 6:20-8:50, KoltH S132

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Computer Science (CSci)

(4-192 Electrical Engineering/Computer Science Building; 625-4002)

### Institute of Technology

Textbooks for most CSci courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

(See also General College; and Information and Decision Sciences)

Your attention is called to the Undergraduate Development Certificate in Computer Science, 45 and 90 credits, **page 531**; and Computer Science degree, below.

Daniel Boley, Associate Professor  
 John Carlis, Associate Professor  
 David Du, Professor  
 Ding-Zhu Du, Professor  
 David Fox, Professor  
 Krzysztof Frankowski, Associate Professor  
 Maria Gini, Associate Professor  
 Ravi Janardan, Associate Professor  
 Joseph Konstan, Assistant Professor  
 Vipin Kumar, Professor  
 John Riedl, Assistant Professor  
 James Schnepf, Teaching Specialist  
 Shashi Shekhar, Associate Professor  
 Jaideep Srivastava, Associate Professor  
 Marvin L. Stein, Professor  
 Anand Tripathi, Associate Professor

**A Bachelor of Arts (B.A.) with a major in computer science offered through the College of Liberal Arts can be completed during the evening.**

**For information about the Bachelor of Information Networking degree offered through Continuing Education and Extension/University College in conjunction with North Hennepin Community College (NHCC), see the Degrees and Certificates section of this bulletin, page 505.**

*Students are encouraged to pick up the curriculum guide in the Computer Science office.*

The following is a partial list of the course requirements common to both the B. Comp. Sci. (Institute of Technology) and the B.A. (College of Liberal Arts).

### Required Preparatory Courses

Math 1251-1252, 1261, and Math 3251, 3261; Stat 3091 or 5121 for students intending to take additional work in statistics

### Major Requirements

CSci 3311, 3316, 3317, 3321, 3322, 3327, 5102, 5106, 5201, 5301, 5400

### Substitutes

Students may use the following approved substitutes for their computer science degree or certificate programs: CSci 3400 for CSci 3311, CSci 3106 for CSci 3316, CSci 3105 for CSci 3321, CSci 3107 or 5101 for CSci 3327, CSci 5121 for CSci 3322

Students are referred to the Institute of Technology Bulletin or the College of Liberal Arts Bulletin for specifics on additional requirements (request by calling 625-2008).

Permission of the department is required for admission to the major. For additional information, contact CEE Counseling, 625-2500.

### Computer Science mathematics prerequisites in the Institute of Technology and the College of Liberal Arts

The entrance requirement for the Institute of Technology and the College of Liberal Arts and the prerequisite for Math 1251 is 4 years of high school mathematics including solid geometry and trigonometry. Any student who meets this requirement is eligible to register for Math 1251. However, if it has been two years or more since last taking a mathematics course, the student is strongly advised to register for Math 1201 or possibly GC 0631. A student who has completed GC 0631 or its equivalent (higher algebra) in high school or college (not a trade school) within the last 2 years may register for Math 1201. GC 0631 and Math 1201 take the place of the junior and senior mathematics courses in high school. If you need assistance in determining math placement, please contact a CEE adviser at 625-2500.

(See also business and mathematics under General College; and Operations and Management Science)

**Joint Day/Extension Classes**—You may register through Extension for day school classes scheduled before 4 p.m. in Computer Science; written permission of the instructor is necessary to register. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

### Institute of Technology (I.T.) Computer Fee

A \$100 quarterly computer fee is assessed for use of I.T. Unix computer workstations. *Students are required to pay this \$100 computer fee only once each quarter.* If you have been assessed this fee with your day registration or an earlier CEE registration, please provide us with a copy of your fee statement.

The fee will be assessed at registration to the following groups of students:

1. Students who are taking an I.T. course that requires a Unix account in the I.T. public labs
2. All students in I.T. upper division *and Adult Specials* who are registered for 6 or more credits
3. Upper Division students in C.L.A. majoring in Astronomy, Chemistry, Computer Science, Geology, Mathematics, or Physics who are registered for 6 or more credits
4. All graduate students in I.T. graduate programs taking one or more courses who are registered for 6 or more credits, *except those who have completed 36 credits in graduate school, exclusive of thesis credits.* (These programs are Aerospace Engineering, Astrophysics, Biomedical Engineering, Chemical Engineering, Chemical Physics, Chemistry, Civil Engineering, Computer and Information Sciences, Control Science and Dynamical Systems, Electrical Engineering, Fluid Mechanics, Geological Engineering, Geology, Geophysics, Industrial Engineering, Materials Science and Engineering, Mathematics, Mechanical Engineering, Mechanics, Mineral Engineering, and Physics)
5. I.T. students who have not been required to pay the fee and who want a Unix account in the I.T. Labs

**CSci 3101 AN INTRODUCTION TO COMPUTER APPLICATIONS FOR SCIENTISTS AND ENGINEERS.** 4 credits, \$1100-1101, tuition\*: Resident \$374; Non-resident \$1084.60. *This course requires access to the IT Computer Lab. If you have not already paid the \$100 quarterly computer fee, please include the additional amount with your tuition.*

Algorithm development and the principles of computer programming using the Fortran language, emphasizing numerical methods for science and engineering applications. Integral open laboratory. (Prereq 1 qtr calculus. Limited to 60)

Fall Qtr, ★Sec 1, Lect, M, 6:10-8:40, EE/CSci 3230; Rec, W, 6:10-7:30, EE/CSci 3230

**CSci 3113 INTRODUCTION TO PROCEDURAL PROGRAMMING IN C.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60. *This course requires access to the IT Computer Lab. If you have not already paid the \$100 quarterly computer fee, please include the additional amount with your tuition.*

Introduction to computer programming in the procedural paradigm. Students use the C language to write several programs that illustrate flow control, basic data types (array, record, pointer), and program structuring. Course is designed both as an introduction to programming and to prepare students for more advanced courses in data structures and algorithms. (Prereq precalculus or #, not for credit after taking 3121, 3322, or 5113. Limited to 60)

Winter Qtr, ★Sec 1, M, 6:10-8:40, EE/CSci 3210; Rec, W, 6:10-7:30, EE/CSci 3210, 3230  
Spring Qtr, ★Sec 2, M, 6:10-8:40, EE/CSci 3210; Rec, W, 6:10-7:30, EE/CSci 3210, 3230

**CSci 3121 SURVEY OF DATA STRUCTURES AND ALGORITHMS.** 4 credits, \$3105, 3321, tuition\*: Resident \$374; Non-resident \$1084.60. *This course requires access to the IT Computer Lab. If you have not already paid the \$100 quarterly computer fee, please include the additional amount with your tuition.*

Fundamental data structures with some of the rudimentary computer algorithms are introduced. Students will implement these data structures and their operations as abstract data types. The course includes a study of C++ with emphasis on implementation of data types and control structures. (Prereq knowledge of C or 3113 or #. Meets concurrently with 3321. Limited to a combined total of 100)

Spring Qtr, ★Sec 1, Lect, M, 6:10-8:40, MechE 108; Rec, W, 6:10-7:30, MechE 108

**CSci 3311 DISCRETE STRUCTURES OF COMPUTER SCIENCE.** 4 credits, \$3400, tuition\*: Resident \$374; Non-resident \$1084.60.

Mathematical techniques and structures needed in Computer Science. Topics include formal logic, elementary combinatorics, induction, recurrences, relations and graphs. (Prereq 3317 and 3321 or #. Limited to 60)

Spring Qtr, ★Sec 1, Lect, T, 6:10-8:40, MechE 108; Rec, Th, 6:10-7:30, MechE 108

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



**CSci 3316 THE STRUCTURE OF COMPUTER PROGRAMMING I.** 4 credits, §3106, tuition\*: Resident \$374; Non-resident \$1084.60. *This course requires access to the IT Computer Lab. If you have not already paid the \$100 quarterly computer fee, please include the additional amount with your tuition.*

Different programming paradigms as a formal way of expressing computer algorithms and data. Procedures, recursion, and iteration as algorithmic development techniques. Use of abstraction and of modularity. The language Scheme is used for illustration of ideas and lab problems. (Prereq 1 qtr calculus or #. Limited to 60)

Fall Qtr, ★Sec 1, Lect, T, 6:10-8:40, EE/CSci 3230; Rec, Th, 6:10-7:30, EE/CSci 3230

**CSci 3317 THE STRUCTURE OF COMPUTER PROGRAMMING II.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60. *This course requires access to the IT Computer Lab. If you have not already paid the \$100 quarterly computer fee, please include the additional amount with your tuition.*

Advanced programming paradigms. Object-oriented programming, logic programming, and pattern matching are illustrated with examples. Generic operators, local variables, and objects as ways of encapsulating different conceptual parts of a program. The language Scheme is used for illustration of ideas and lab programs. (Prereq 3316 or #. Limited to 60)

Winter Qtr, ★Sec 1, Lect, T, 6:10-8:40, MechE 108; Rec, Th, 6:10-7:30, MechE 108

**CSci 3321 ALGORITHMS AND DATA STRUCTURES I.** 4 credits, §3105, 3121, tuition\*: Resident \$374; Non-resident \$1084.60. *This course requires access to the IT Computer Lab. If you have not already paid the \$100 quarterly computer fee, please include the additional amount with your tuition.*

Fundamental data structures with some of the rudimentary computer algorithms are introduced. Students will implement these data structures and their operations as abstract data types. The course includes a study of C++ with emphasis on implementation of data types and control structures. (Prereq knowledge of C or 3113 or #. Meets concurrently with 3121. Limited to a combined total of 100)

Spring Qtr, ★Sec 1, Lect, M, 6:10-8:40, MechE 108; Rec, W, 6:10-7:30, MechE 108

**CSci 3327 INTRODUCTION TO THE ORGANIZATION OF COMPUTER SYSTEMS.** 4 credits, §3107, 5101, tuition\*: Resident \$374; Non-resident \$1084.60. *This course requires access to the IT Computer Lab. If you have not already paid the \$100 quarterly computer fee, please include the additional amount with your tuition.*

Organization of hardware and software systems that support computer programming and program execution. Symbolic assembly language to study the mapping of application programs and data into the underlying hardware. Ideas illustrated in assembly language programs (currently Motorola 680x0). (Prereq 3316 or 3121 or 3321 or #. Meets concurrently with 5101. Limited to a combined total of 100)

Fall Qtr, ★Sec 1, Lect, Th, 6:10-8:40, MechE 212; Rec, T, 6:10-7:30, MechE 212

**CSci 5101 STRUCTURE AND PROGRAMMING OF SOFTWARE SYSTEMS I.** 4 credits, §3107, 3327, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40. *This course requires access to the IT Computer Lab. If you have not already paid the \$100 quarterly computer fee, please include the additional amount with your tuition.*

See course description for CSci 3327. (Prereq non-CSci major, 3316 or 3121 or 3321 or #. Qualified students who are **nonmajors** may register for graduate credit at the University of Minnesota. Meets concurrently with 3327. Limited to a combined total of 100)

Fall Qtr, ★Sec 1, Lect, Th, 6:10-8:40, MechE 212; Rec, T, 6:10-7:30, MechE 212

**CSci 5102 STRUCTURE AND PROGRAMMING OF SOFTWARE SYSTEMS II.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40. *This course requires access to the IT Computer Lab. If you have not already paid the \$100 quarterly computer fee, please include the additional amount with your tuition.*

Extension of basic machine architecture and the principles of system programming; closed subroutines; parameter passing mechanisms; macros and conditional assembly; input-output; assembly linking and loading; dynamic resource allocation; introduction to operating systems, job control language, and processes. Informal laboratory. (Prereq 3107 or 5101 or 3327 or #. Qualified students who are **nonmajors** may register for graduate credit at the University of Minnesota. Limited to 60)

Fall Qtr, ★Sec 1, W, 6-9:30, 120 Science Bldg, NHCC, 7411 85 Ave N, Brooklyn Park.

*Students enrolling in this section must purchase textbooks only at the North Hennepin Community College bookstore. (Limit 40)*

Winter Qtr, ★Sec 2, Th, 6:10-8:40, EE/CSci 3230

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**CSci 5106 STRUCTURE OF HIGHER LEVEL LANGUAGES.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40. *This course requires access to the IT Computer Lab. If you have not already paid the \$100 quarterly computer fee, please include the additional amount with your tuition.*

Formal definition of the syntax and semantics of programming languages; semantics both by means of interpreters and by using the axiomatic approach. Concepts underlying programming languages and their implementations in a selected group of languages. Program description at compile time and execution time. (Prereq 3322 or 5121 or #. Qualified students who are **nonmajors** may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 30 Extension students)

Winter Qtr, ★●Sec 1, MW, 4-5:15, EE/CSci  
3-230

**CSci 5110 USER INTERFACES AND PROGRAMMING WITH X.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40. *This course requires access to the IT Computer Lab. If you have not already paid the \$100 quarterly computer fee, please include the additional amount with your tuition.*

Design, programming, and evaluation of interactive applications with emphasis on X window system. Software structure of window systems and toolkits, prototyping and interface construction tools, design and implementation of application interfaces, models of human-computer interaction, and interface evaluation. Informal Lab. (Prereq 3322, 3327 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 30 Extension students)

Winter Qtr, ★●Sec 1, WF, 4-5:15, MechE 212

**CSci 5113 INTRODUCTION TO OBJECT-ORIENTED PROGRAMMING USING C++.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40. *This course requires access to the IT Computer Lab. If you have not already paid the \$100 quarterly computer fee, please include the additional amount with your tuition.*

An introduction to object-oriented programming in C++ for students who already know how to program in C. *Topics:* Object-oriented programming. Inheritance, including polymorphism and multiple inheritance. Container classes and iterators. Operator overloading, user-defined implicit conversions, constructors, destructors, and templates. (Prereq a background in C language programming equivalent to at least CSci 3113. May not be taken for graduate credit by computer science majors. Other qualified students may register for graduate credit at the University of Minnesota. Limited to 40)

Fall Qtr, ★●Sec 1, TTh, 4:40-5:55, MechE 212

(A joint Day/Extension class limited to 30 Extension students)

Winter Qtr, ★Sec 2, Th, 6:10-8:40, 119 Science Bldg, NHCC. *Students enrolling in this section must purchase textbooks only at the North Hennepin Community College bookstore.*

**CSci 5122 ADVANCED DATA STRUCTURES.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40. *This course requires access to the IT Computer Lab. If you have not already paid the \$100 quarterly computer fee, please include the additional amount with your tuition.*

Internal and external sorting. Symbol tables. Optimal binary search trees. AVL trees. B-Trees. Tries. Hashing. Files and Indexes, ISAM, multilists, inverted files, cellular partitions, differential files. (Prereq 5121 or 3322 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 30 Extension students)

Winter Qtr, ★●Sec 1, TTh, 4-5:15, EE/CSci  
3111

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**CSci 5180 SOFTWARE ENGINEERING I.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40. *This course requires access to the IT Computer Lab. If you have not already paid the \$100 quarterly computer fee, please include the additional amount with your tuition.*

Emphasis on abstractions as vehicle for analysis, design, and testing and on modules as vehicle for implementation. Software life cycle and project data bases. PSL/PSA. Actor model of computation process, and data modeling. Specification language MSG. Use of abstractions in functional, architectural, and module design. Test case selection and reliability assessment. Systematic coding: invariants and representation functions. (Prereq 5106 or #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 40)

Fall Qtr, ★●Sec 1, WF, 4-5:15, MechE 212 (A joint Day/Extension class limited to 30 Extension students)

Winter Qtr, ★Sec 2, M, 6-9:30, 120 Science Bldg, NHCC, 7411 85 Ave N, Brooklyn Park. *Students enrolling in this section must purchase textbooks only at the North Hennepin Community College bookstore.*

**CSci 5181 SOFTWARE ENGINEERING II.** 5 credits, tuition\*: Resident \$467.50; Non-resident \$1355.75; Resident Graduate credit \$590; Non-resident Graduate credit \$1298; Resident Graduate School credit \$1077.50; Non-resident Graduate School credit \$2370.50. *This course requires access to the IT Computer Lab. If you have not already paid the \$100 quarterly computer fee, please include the additional amount with your tuition.*

Requirements analysis. Project planning and management. Design reviews, software testing, validation strategies. Maintenance. Lab with group projects, 12 hours per week project work outside class. Selected projects on process of systems development, from requirements analysis through maintenance. Student groups will specify, design, implement, and test partial software systems. Emphasis on application of general software development methods and principles from 5180, rather than specific systems. (Prereq 5180. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 30 Extension students)

Spring Qtr, ★●Sec 1, MW, 4-5:15, EE/CSci 3115

**CSci 5201 INTRODUCTION TO COMPUTER ARCHITECTURE.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40. *This course requires access to the IT Computer Lab. If you have not already paid the \$100 quarterly computer fee, please include the additional amount with your tuition.*

Elementary computer architecture, gates and digital logic, register transfers and micro-operations, processor studies of existing systems. (Prereq 3311 or 3400, 3107 or 5101 or 3327 or #. Open for graduate credit only to **nonmajors**. Limited to 40) Fall Qtr, ★Sec 1, M, 6-8:30, 119 Science Bldg, NHCC, 7411 85 Ave N, Brooklyn Park. *Students enrolling in this section must purchase textbooks only at the North Hennepin Community College bookstore.*

Spring Qtr, ★●Sec 2, TTh, 4-5:15, EE/CSci 3230 (A joint Day/Extension class limited to 30 Extension students)

**CSci 5211 DATA COMMUNICATIONS AND COMPUTER NETWORKS.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40. *This course requires access to the IT Computer Lab. If you have not already paid the \$100 quarterly computer fee, please include the additional amount with your tuition.*

Network classification and services. Hardware components: multiplexors, concentrators, communications media. Network protocols and architectures. Research areas. Informal laboratory. (Prereq 5102 or #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 60)

Winter Qtr, ★Sec 1, Th, 6:10-8:40, EE/CSci 3115

Spring Qtr, ★Sec 2, T, 6-8:30, 142 Science Bldg, NHCC, 7411 85 Ave N, Brooklyn Park. *Students enrolling in this section must purchase textbooks only at the North Hennepin Community College bookstore. (Limit 40)*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**CSci 5212 NETWORK PROGRAMMING LABORATORY.** 2 credits, tuition\*: Resident \$187; Non-resident \$542.30; Resident Graduate credit \$236; Non-resident Graduate credit \$519.20; Resident Graduate School credit \$431; Non-resident Graduate School credit \$948.20. *This course requires access to the IT Computer Lab. If you have not already paid the \$100 quarterly computer fee, please include the additional amount with your tuition. Must be taken A-F.* (Prereq 5102 or #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 20)

Spring Qtr, ★Sec 1, W, 6-7:30, 119 Science Bldg, NHCC, 7411 85 Ave N, Brooklyn Park.  
*Students enrolling in this section must purchase textbooks only at the North Hennepin Community College bookstore.*

**CSci 5221 ADVANCED COMPUTER NETWORKS AND THEIR APPLICATIONS** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40. *This course requires access to the IT Computer Lab. If you have not already paid the \$100 quarterly computer fee, please include the additional amount with your tuition.*

Design, maintenance, and use of high-speed networks and their impact on society. Emphasis on new emergent protocols such as FDDI-II, Frame-Relay, ATM Characteristics of hardware, protocols and applications such as high performance distributed computing and multimedia. **Must be taken A-F.** (Prereq 5211 or #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 40)

Spring Qtr, ★Sec 1, Th, 6-8:30, 120 Science Bldg, NHCC, 7411 85 Ave N, Brooklyn Park.  
*Students enrolling in this section must purchase textbooks only at the North Hennepin Community College bookstore.*

**CSci 5222 NETWORK OPERATIONS AND ADMINISTRATION.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40. **Must be taken A-F.** *This course requires access to the IT Computer Lab. If you have not already paid the \$100 quarterly computer fee, please include the additional amount with your tuition.*

Provides skills to plan, configure, install, diagnose, performance-tune, operate and manage computer

networks. Students will gain hands-on experience with hardware, software, and application/service components of commercially important networks at the time. A long list of case-studies representative of the 1992-93 time-frame are included. Instruction focus is on working with real-world network systems; students should be familiar with basic concepts such as OSI reference model. (Prereq 5211 or #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 20)

Winter Qtr, ★Sec 1, T, 6-8:30, 142 Science Bldg, NHCC, 7411 85 Ave N, Brooklyn Park.  
*Students enrolling in this section must purchase textbooks only at the North Hennepin Community College bookstore.*

**CSci 5280 COMPUTER-AIDED DESIGN.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40. *This course requires access to the IT Computer Lab. If you have not already paid the \$100 quarterly computer fee, please include the additional amount with your tuition.*

CAD for digital systems with emphasis on VLSI. Hardware description languages: synthesis, simulation, test generation. *Informal lab.* (Prereq 3311 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 30 Extension students)

Fall Qtr, ★OSec 1, TTh, 4:15-5:30, EE/CSci 3125

**CSci 5281 COMPUTER-AIDED DESIGN OF VLSI.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40. *This course requires access to the IT Computer Lab. If you have not already paid the \$100 quarterly computer fee, please include the additional amount with your tuition.*

CAD for digital systems with emphasis on VLSI. Physical design: partitioning, placement and routing, design and electrical rule checks. Inherent complexity of algorithms. Analysis of best known algorithms. *Informal lab.* (Prereq 3311 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 30 Extension students)

Winter Qtr, ★OSec 1, TTh, 4-5:15, EE/CSci 3115

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**CSci 5301 NUMERICAL ANALYSIS.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40. *This course requires access to the IT Computer Lab. If you have not already paid the \$100 quarterly computer fee, please include the additional amount with your tuition.*

Floating point arithmetic and rounding errors. Iterative methods. Numerical solution of nonlinear equations. Newton's method. Direct methods for linear systems of equations. Gaussian elimination. Factorization methods. Interpolation and approximation. Numerical integration and differentiation. Introduction to numerical solution of ordinary differential equations. Informal laboratory. (Prereq Math 3261 or #; a knowledge of Pascal or FORTRAN is assumed. Qualified students who are **nonmajors** may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 30 Extension students)

Winter Qtr, ★●Sec 1, W, 6:10-8:40, EE/CSci 3115

**CSci 5400 INTRODUCTION TO AUTOMATA THEORY.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40. *This course requires access to the IT Computer Lab. If you have not already paid the \$100 quarterly computer fee, please include the additional amount with your tuition.*

Turing machines, computable functions, unsolvability of the halting problem, recursive functions. Finite state models; equivalence, minimization, properties, decision questions, characterizations. Regular expressions. Survey of other automata. (Prereq 3311 or #. Open for graduate credit only to **nonmajors**. A joint Day/Extension class limited to 30 Extension students)

Spring Qtr, ★●Sec 1, T, 6:10-8:40, EE/CSci 3115

**CSci 5502 INTRODUCTION TO OPERATING SYSTEMS.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40. *This course requires access to the IT Computer Lab. If you have not already paid the \$100 quarterly computer fee,*

*please include the additional amount with your tuition.*

Definition and historical development of operating systems. Abstractions and implementations of features common to most systems. Concurrency and related control problems. Resource allocation. Storage allocation. Process manager and the kernel of an operating system. Sharing. Capability-based addressing. Protection. Performance measurement and analysis. (Prereq CLA CSci major or IT CSci major upper division or grad, 5102 and 3322 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 30 Extension students)

Spring Qtr, ★●Sec 1, Th, 6:10-8:40, MechE 202

**CSci 5504 INTRODUCTION TO COMPILERS.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40. *This course requires access to the IT Computer Lab. If you have not already paid the \$100 quarterly computer fee, please include the additional amount with your tuition.*

Techniques for implementing programming languages. The compiler front end, recognizing syntactic structures, generating internal representations. Symbol table manipulation and type checking. *Informal Lab. Lecture is broadcast from Rochester every other week.* (Prereq 5106 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 30 Extension students)

Winter Qtr, ★●Sec 1, W, 4:45-7:30, MechE 102

**CSci 5511 ARTIFICIAL INTELLIGENCE I.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40. *This course requires access to the IT Computer Lab. If you have not already paid the \$100 quarterly computer fee, please include the additional amount with your tuition.*

Introduction to ideas and issues of artificial intelligence. Knowledge representation, problem solving, search, inference techniques, theorem proving. Expert systems. Introduction to applications. Programming languages. *Informal lab.* (Prereq 3322 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 30 Extension students)

Fall Qtr, ★●Sec 1, T, 6:10-8:40, MechE 108

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**CSci 5703 DATA BASE SYSTEM DESIGN.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40. *This course requires access to the IT Computer Lab. If you have not already paid the \$100 quarterly computer fee, please include the additional amount with your tuition.*

Application of data base concepts to the design and development of data base systems and data base applications. Design of current commercial and research-oriented data base systems. Techniques of using data base systems for applications. *Informal lab.* (Prereq 5702 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 30 Extension students)

Spring Qtr, ★●Sec 1, MW, 4-5:15, MechE 221

**CSci 8102 OPERATING SYSTEMS THEORY.** 3 credits, tuition\*: Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30. *This course requires access to the IT Computer Lab. If you have not already paid the \$100 quarterly computer fee, please include the additional amount with your tuition.*

Computer system modeling and performance evaluation. Queuing network models and analysis methods. Multiprocessor and distributed system control algorithms; synchronization, mutual exclusion protocols, resource management, deadlocks, scheduling, load balancing. Security models; security problems in distributed systems. *Lecture is broadcast from Rochester every other week.* (Prereq 5104, 5502. Open only to students admitted to the University of Minnesota Graduate School. A joint Day/Extension class limited to 30 Extension students)

Fall Qtr, ★●Sec 1, W, 4:45-7:30, MechE 102

**CSci 8103 DISTRIBUTED AND PARALLEL PROGRAMMING.** 3 credits, tuition\*: Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30. *This course requires access to the IT Computer Lab. If you have not already paid the \$100 quarterly computer fee, please include the additional amount with your tuition.*

Concurrent programming constructs. Formal models of concurrent systems. Problem mapping to distributed and parallel architectures. Synchronous algorithms. Termination detection problem. Distributed and parallel algorithms for graph problems. Common knowledge in distributed systems. Reliable communication and consensus protocols. *Lecture is broadcast from Rochester every other week.* (Prereq 5502, 8101. Open only to students admitted to the University of Minnesota Graduate School. A

joint Day/Extension class limited to 30 Extension students)

Spring Qtr, ★●Sec 1, W, 4:45-7:30, MechE 102

## Continuing Education for Women

(See credit courses list on page 395)

## Counseling, Chemical Dependency

(See Family Social Science)

## Cultural Studies and Comparative Literature (CSCL)

(350 Folwell Hall: 624-8099)

### College of Liberal Arts

Textbooks for most CLit, CSDS, and CSCL courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000). (See also American Studies; Art History; Classical and Near Eastern Studies; English; General College; Humanities; Interdepartmental Study; Philosophy; Psychology; Compleat Scholar noncredit courses; and individual foreign language departments for other literature courses)

Chris Bezat, Lecturer  
Jerome Chateau, Lecturer  
Giulia Colaizzi, Lecturer  
Jeanine Ferguson, Lecturer  
Ole Gram, Lecturer  
Jennifer Home, Lecturer  
Silvia Lopez, Lecturer  
Elizabeth McLemore, Lecturer  
Martha Mockus, Lecturer  
Chuck Sheaffer, Lecturer  
Scott Sherer, Lecturer  
Gary Thomas, Associate Professor  
Elizabeth Walden, Lecturer

**Joint Day/Extension Classes**—You may register through Extension for most day school classes scheduled before 4 p.m. in Comparative Literature, Comparative Studies in Discourse and Society, and Cultural Studies and Comparative Literature. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before registration for that quarter begins.

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**Comparative Literature (CLit)**

*No CLit courses offered through Extension Classes 1995-96*

**Cultural Studies and Comparative Literature (CSCL)**

**Most of the courses for a major in Cultural Studies and Comparative Literature can be completed in the evening.**

Students interested in a major in Cultural Studies and Comparative Literature should discuss plans with a CEE adviser (625-2500).

**B.A. Major Sequence**

**Major Requirements**

**A. CSCL Department Courses**—48 credits to include: 1) CSCL 1301 or 1001; and 1302, and 1303 (12 credits); 2) Five 3xxx-level CSCL courses, including courses from at least three of the following four divisions (20 credits): a) Discursive Practices, b) Culture and Conflict: Case Studies, c) Influential Configurations of Knowledge, and d) Social Constructions of the Subject; 3) Four 5xxx-level CSCL courses, including one CSCL 5990 (Senior Workshop/Major Project) and three additional courses carrying any of the departmental designators (CSCL, CLit, CSDS) (16 credits)

**B. Concentration** (16 credits)—Four 3xxx-5xxx CLA courses relevant to the declared area of concentration, approved by an adviser. At least one course must be from CSCL, CLit, or CSDS. None of the four courses can be 1xxx level (16 credits).

**Note:** For sections A2, A3, and B, departmental (CSCL, CLit, CSDS) topics courses (3910 and 5910) and directed studies (3970 and 5970) will meet stated requirements. Up to four courses in sections A and B, excluding 3xxx- and 5xxx-department courses, may be taken S-N.

**B.A. Minor Sequence**

**Minor Requirements**

(Minimum 24 credits)

Six CSCL courses, including a) CSCL 1301 or 1001 (4 credits), and 1302 or 1303 (4 credits), b) three 3xxx-level courses (12 credits), and c) one 5xxx-level CSCL course carrying any of the departmental designators (CSCL, CLit, CSDS) (4 credits)

**Concentration**—Under either option, the nature of the concentration and the courses which comprise it are a matter of your own choice, though your final program must be approved by your adviser.

**You need not be majoring in Cultural Studies and Comparative Literature to register for these classes.**

**CSCL 1001 INTRODUCTION TO CULTURAL STUDIES: RHETORIC, POWER, DESIRE.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Critical theories and methods for examining texts, artistic forms, and discursive practices that reflect and produce a society's culture. Case studies from history and the present, including examples from the visual arts, music, video, film, literature, myth, ritual, and the built environment. (No prereq)

Winter Qtr, Sec 1, W, 6:20-8:50, FolH 138, Thomas

**CSCL 1301 DISCOURSE AND SOCIETY: READING CULTURE.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20. (IS)

General introduction to modes of expression (e.g. verbal, visual, musical) through representative works. Analysis of discourse in relation to social structures, examining its role in creating and contesting social borders, replicating cultures, and attaching differential privilege to various cultural practices. (No prereq. Limited to 30)

Fall Qtr, ★Sec 1, Th, 6:20-8:50, FolH 138,

McLemore

Spring Qtr, ★Sec 2, W, 6:20-8:50, FolH 138

**CSCL 1302 DISCOURSE AND SOCIETY: TEXT AND CONTEXT.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20. (IS)

Examination of varied historically grounded case studies, in order to explicate ways in which social and political tensions of particular moments and local milieus find representation in specific items of discourse. Relation of cultural discourses to the sociohistorical conditions of their emergence. (No prereq. Limited to 30)

Winter Qtr, ★Sec 1, T, 6:20-8:50, FolH 138

**CSCL 1303 DISCOURSE AND SOCIETY: KNOWLEDGE, PERSUASION, AND POWER.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Inquiry into the ways certain bodies of discourse come to cohere, to exercise persuasive power, and to be regarded as authoritative, while others are marginalized, ignored, or denigrated. Interrelations of center and periphery, hegemony and counterhegemony, cannon and apocrypha. (No prereq. Limited to 30)

Spring Qtr, ★Sec 1, Th, 6:20-8:50, FolH 138

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**CSCL 3115 CINEMA AND IDEOLOGY.** 4 credits, tuition\* (includes \$15 course fee): Resident \$359; Non-resident \$1012.60.

Study of the major aspects of film as discourse with special attention to the complex relations it maintains with the ideological and political contexts in which it appears. Specific films will be used to study cinema as institution, film as current product, and artistic ideologies in politics. (No prereq)

Fall Qtr, Sec 1, W, 6:20-8:50, FolH 246, Colaizzi

(See also REX 0803, *The Big Tomorrow: Hollywood and the Politics of Multicultural America*)

**CSCL 3132 THE MODERN NOVEL IN A COMPARATIVE PERSPECTIVE.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Examination of the relationship of modernity to the genre of the novel in Western Europe and the Americas. Students will analyze the notions of subjectivity and philosophical reflection as they are manifested in the literatures of various novelists over a variety of literary periods and geographical terrains. (No prereq)

Fall Qtr, Sec 1, M 6:20-8:50, FolH 218, Gram

**CSCL 3172 MUSIC AS A DISCOURSE.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Close examination of widely varying musical forms and styles, "classical" and "popular," in relation to discourses about music and to larger patterns of culture, ideology, and power. (No prereq)

Winter Qtr, Sec 1, Th, 6:20-8:50, FolH 114, Mockus

(See also CSch 0203, *Fundamentals of Music*)

**CSCL 3176 OPPOSITIONAL CINEMAS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

An examination of the way film texts and the social institutions of cinema both contribute to and resist the reproduction of social relations in modern Western countries. Particular attention to class, race, and gender as sites of socio-cultural conflict. (No prereq)

Spring Qtr, Sec 1, Th, 6:20-8:50, FolH 116, Home

**CSCL 3321 THEORIES OF CULTURE.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Sociological, anthropological, and philosophical models of culture. Critical analyses of the interrelations of art, society, and ideology. Authors to be considered may include, but are not limited to Marx, Durkheim, Freud, Gramsci, Benjamin, Marcuse, Geertz, Derrida, and Foucault. (No prereq)

Spring Qtr, Sec 1, M, 6:20-8:50, FolH 312, Lopez

**CSCL 3331 SCIENCE AND THE HUMANITIES.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Implications for ethics and social design of the competing claims made by the sciences and the humanities. Kinds of creativity and the ways of knowing in the two fields. Snow, Bronowsky, Frye, Bohr, Beckett, Heisenberg, Skinner, E.O. Wilson. (Prereq jr or sr or #)

Fall Qtr, Sec 1, T, 6:20-8:50, FolH 312, Chateau

**CSCL 3458 THE BODY AND THE POLITICS OF REPRESENTATION.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Western representation of the human body, Renaissance to 1900, considering both Western and non-Western peoples. Body's appearance as site/sight for production of sociocultural difference (race, ethnicity, class, gender). Visual arts, medical treatises, courtesy books, travel literature, ethnographies, erotica. (No prereq)

Fall Qtr, Sec 1, Th, 6:20-8:50, FolH 326, Walden

**CSCL 3472 GAY MEN AND HOMOPHOBIA IN THE MODERN WEST.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Historical experience and the representation of gay men in the West since 1600, studied in the context of social constructions of same-sex desire, homophobia, gender, sexuality and the body, in discourses of religion, law, literature, and the arts. (No prereq)

Spring Qtr, Sec 1, T, 6:20-8:50, FolH 312, Sherer

**CSCL 3910 TOPICS: THE AVANT GARDE.** 4 credits, tuition (includes \$15 course fee)\*: Resident \$359; Non-resident \$1012.60.

Survey of the movements that make up the historical avant-garde including Italian futurism, dada, surrealism, and Russian constructivism. Individual works of art presented in social context as a way to illustrate attempts to break away from tradition. Historical avant-garde movements in France, Germany, Italy, the U.S., and Russia through their cultural works in different media: film, photography, illustrated magazines, painting, poetry, manifestoes, posters, and novels. (No prereq)

Fall Qtr, Sec 1, T, 6:20-8:50, FolH 138, Ferguson

\* Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



**CSCL 3910 TOPICS: THE POLITICS OF IDENTIFICATION IN MUSICAL EXPRESSION.** 4 credits, tuition\* (includes \$15 course fee): Resident \$359; Non-resident \$1012.60.

How music articulates formations of identification, such as individuality, various forms of group solidarity (revolutionary-resistance, nation, race-ethnicity, religion), sexuality, gender, and ideological-aesthetic-philosophical beliefs, constitutes the problematic for this course. Through different styles and genres of music, including the blues, bee bop, opera, punk, hard rock, rap, and performing art, students explore how identification is made possible by the construction of a musical other; the role resistance, rage, and violence play in identificatory expressions; the function of affective power in "tuning" the rhythms of subjectivity; the image of the superstar and the concert milieu; cultural demands and expectations for the reproduction of "proper" identities; and the techno machine (production-distribution systems often mainstream, and thus compromise, difference). No musical training is necessary. (No prereq)

Spring Qtr, Sec 2, W, 6:20-8:50, FolH 344,  
C Bezat

**CSCL 3979 ISSUES IN CULTURAL PLURALISM.** 4 credits, §AmSt 3113, tuition\*: Resident \$344; Non-resident \$997.60.

Critical basis for participation in current debate about American cultural pluralism. Investigates the roots and rhetoric of the prevalent multiculturalist arguments and the emergent conservative responses; considers the effects of thesis formulations, and explores alternatives. Readings include essays, articles, and fiction from a variety of intellectual perspectives and cultural traditions. (Prereq #)

Winter Qtr, Sec 1, M, 6:20-8:50, FolH 340,  
Sheaffer

**Comparative Studies in Discourse and Society (CSDS)**

*No CSDS courses offered through Extension Classes 1995-96*

**Curriculum and Instruction (CI)**

(125 Peik Hall: 625-6372)

**College of Education and Human Development**  
(Department of Curriculum and Instruction)

*Combines former individual departments of Art Education (ArEd), Elementary Education (Elem), Curriculum and Instructional Systems (CISy), and Secondary Education (SeEd).*

Textbooks for most CI courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

- Eugene M. Anderson, Associate Professor
- Patricia G. Avery, Associate Professor
- Richard Beach, Professor
- L. JoAnne Buggy, Lecturer
- David Carberry, Teaching Assistant
- LaVonne Carlson, Instructor
- John J. Cogan, Professor
- Margaret DiBlasio, Associate Professor
- Fred N. Finley, Associate Professor
- Kerry Freedman-Norberg, Associate Professor
- William E. Gardner, Professor
- Michael F. Graves, Professor
- Harlan S. Hansen, Professor
- Patricia A. Heller, Associate Professor
- Simon R. Hooper, Associate Professor
- Karen N. Hoyle, Professor
- Roger T. Johnson, Professor
- Helen L. Jorstad, Associate Professor
- Judith Lambrecht, Professor
- Frances Lawrenz, Professor
- John C. Manning, Professor
- Dianne Monson, Professor
- B. Murphy, Lecturer
- Darcia Narvaez, Assistant Professor
- R. Michael Paige, Associate Professor
- Eric Pandiscio, Lecturer
- Margaret Y. Phinney, Assistant Professor
- Thomas R. Post, Professor
- Gregory C. Sales, Associate Professor
- Susan Stan, Teaching Assistant
- James Stochl, Professor
- Barbara M. Taylor, Professor
- Diane J. Tedick, Assistant Professor
- Constance L. Walker, Associate Professor
- Susan M. Watts, Assistant Professor

**Restriction in CI classes**—A student who does not attend the first class session will, at the instructor's discretion, not be allowed to continue. If it is not possible to attend the first class session, the student should contact the instructor in advance (or the Art Education office at 625-7818) to make necessary arrangements to hold a place in class.

*Enrollments in limited classes in this department are strictly enforced. Neither the department nor the course instructor will give written permission for registration in these classes once the limit is reached and the class closes. However, you may check for openings in day school.*

*These courses are subject to frequent changes in time and rooms. Check for correct day, time, and room in a day school class schedule.*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Master's Degree**—Master of Education degrees with a focus on **Curriculum and Instruction** or **Teacher Leadership** are offered through the College of Education and Human Development. *For further information on degree programs, telephone (612) 626-7196.*

**Special Offerings**—A variety of courses and workshops in education are 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: Department Chair, Department of Curriculum and Instruction, University of Minnesota, 145 Peik Hall, 159 Pillsbury Drive S.E., Minneapolis, MN 55455. Telephone: 625-1362.

**CI 5055 (formerly ArEd 5316) MULTICULTURAL ART EDUCATION.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Education experiences involving the arts of diverse peoples; alternative conceptions of artistic tradition, value, and production; significance of cultural content to curriculum and teaching. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension Students)

Fall Qtr, ★○Sec 1, M, 4:30-7:45, PeikH 40, Freedman

**CI 5058 (formerly ArEd 3800) ISSUES IN ART EDUCATION.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Issues and trends, current practices, recent research. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension Students)

Spring Qtr, ★○Sec 1, W, 4:40-7:20, PeikH 40, DiBlasio

**CI 5069 (formerly ArEd 5302) CURRICULUM INNOVATIONS IN ART EDUCATION.** 4 credits, §ArEd 5302, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Study and analysis of innovations, evaluation of materials for teaching units and projects. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension Students)

Fall Qtr, ★○Sec 1, TTh, 4:40-6:25, PeikH 40, DiBlasio

**CI 5074 (formerly ArEd 5318) VISUAL CULTURE AND GLOBAL DEVELOPMENT.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Postmodern uses of art, popular and mass media imagery in international education and global development. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension Students)

Spring Qtr, ★○Sec 1, T, 4:30-7:45, PeikH 40, Freedman

**CI 5113 (formerly Elem 5145, SeEd 5145) CLASSROOM MANAGEMENT IN THE ELEMENTARY SCHOOL.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

For teachers, administrators, and support staff working in elementary school programs; focus on management of student behavior, of instruction as it relates to student behavior, and of teacher organizational tasks within the classroom. (Prereq tchg or admin exper or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Fall Qtr, ★○Sec 1 T, 4:30-7, PeikH 28, Hansen

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**CI 5130 (formerly CISy 5600) INTRODUCTION TO CURRICULUM STUDIES.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Introduction to the field of curriculum. Exploration and assessment of definitions of curriculum; historical and current issues; principles and theories of curriculum; alternative models and methods of design and evaluation. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 20 Extension students) Fall Qtr, ★●Sec 1, M, 4:30-8, PeikH 315, Orton  
Winter Qtr, ★●Sec 2, W, 4:30-8, PeikH 315,  
Pandiscio

Spring Qtr, ★●Sec 3, M, 4:30-8, PeikH 46,  
Pandiscio

**CI 5136 (formerly CISy 5607) HISTORY OF CURRICULUM IN THE UNITED STATES.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Formation of public school subjects and curriculum theory in United States from European roots and early development in 19th century to contemporary issues of reform; social, political, and economic implications of curriculum history. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension Students)

Spring Qtr, ★●Sec 1, T, 4:30-7, PeikH 48, King

**CI 5137 (formerly Elem 5225) THE MULTICULTURAL GENDER-FAIR CURRICULUM.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Planning for development and implementation of a multicultural and gender-fair perspective in elementary and secondary classrooms. Individual teacher goals, professional issues, and resources and teaching strategies for successfully exploring new perspectives. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension Students)

Spring Qtr, ★●Sec 1, M, 4:40-8, PeikH 46,  
Walker

**CI 5145 (formerly CISy 5100) CURRICULUM TOPICS: INSTRUCTIONAL SYSTEMS: Trends and Issues: Using Museums to Integrate Curriculum.** 3 credits (max 6 cr), tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Taught at four museums in the Twin Cities (Minnesota Historical Society-History Center, Walker Art Center, Science Museum of Minnesota, and Minneapolis Institute of Arts). *Walker Art Center conference room is first meeting site.* Focuses on the development of interdisciplinary curriculum through the use of local resource institutions. Teachers learn about the support these institutions can provide and the best ways to take advantage of this support. A variety of intense and exciting learning experiences are included. *For in-service teachers only.* (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension Students) Fall Spec Term, ★●Sec 1, Sa, 10 a.m.-4, Nov.

11, 18, Arr, Freedman-Norberg. *No late fee through Nov. 3*

**CI 5145 (formerly CISy 5100) CURRICULUM TOPICS: INSTRUCTIONAL SYSTEMS: Trends and Issues: Using the Internet for Teaching.** 3 credits (max 6 cr), tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Examination of local area networks for classroom instruction; examination of national networks, such as Gopher and Internet (majority will focus on Internet) for professional development and instructional use. Actual in-class use of networks will focus on instructional issues and classroom management, not technical installation or maintenance. Previous experience in using computers is desirable. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension Students)

Spring Qtr, ★●Sec 2, Th, 4:30-8, PeikH 355,  
Lambrecht

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**CI 5145 (formerly CISy 5100) CURRICULUM TOPICS: PRACTICAL APPROACHES TO EXPERIENTIAL EDUCATION.** 3 credits (max 6 cr), tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

This practitioner-oriented workshop is specifically designed for educators working in school and community settings (such as teachers, trainers, programmers) interested in the design, implementation, and assessment of experiential learning programs such as internships, field study programs, and community service learning. The workshop examines pedagogical principles of experiential education, logistical and design issues, assessment of student learning and assigning of academic credit, ethical and policy issues, and actual examples from existing programs. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Spring Qtr, ★○Sec 3, W, 4:30-7, JonesH 10

**CI 5155 (formerly CISy 5902) CLASSROOM INSTRUCTION AND ASSESSMENT.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Identifying goals, selecting instructional strategies, and developing assessment procedures for contemporary K-12 students. Incorporates issues related to multicultural education and reflective teaching. (Prereq MEd or Graduate school student. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 20 Extension Students)

Fall Qtr, ★○Sec 1, Th, 4:30-7:30, PeikH 48

Winter Qtr, ★○Sec 2, Th, 4:30-8, PeikH 48

Spring Qtr, ★○Sec 3, Th, 4:30-8, PeikH 28, Anderson

**CI 5172 (formerly Elem 5107) TEACHING STUDENTS WITH LEARNING DIFFICULTIES.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Diagnosis of pupil difficulty; development and prevention; tests as aids to teaching; following up a

testing program; socio-emotional problems associated with learning difficulties. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Spring Qtr, ★○Sec 1, M, 4:30-7, PeikH 48, Watts

**CI 5187 (formerly Elem 5602) PRACTICUM: IMPROVEMENT OF TEACHING IN ELEMENTARY OR PRE-KINDERGARTEN SCHOOL.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Elementary school classroom teaching project designed to improve specific teaching skills, planned by student and approved and directed by student's adviser as part of M.Ed. program. (Prereq M.Ed. student in elementary education and early childhood. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 6 Extension students)

Fall Qtr, ★○Sec 1, Arr, Manning

Winter Qtr, ★○Sec 2, Arr, Manning

Spring Qtr, ★○Sec 3, Arr, Hansen

**CI 5195 (formerly SeEd 5351) DIRECTED STUDY IN ELEMENTARY AND SECONDARY EDUCATION.** Cr arr (max 6 credits), §SeEd 5351, tuition\* each credit: Resident \$93.50; Non-resident \$271.15; Resident Graduate credit \$118; Non-resident Graduate credit \$259.60; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Individual or group work on curricular, instructional, or evaluation problems. (Prereq educ or grad student, #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 6)

Fall Qtr, ★Sec 1, Arr, Jorstad

Fall Qtr, ★Sec 2, Arr, Walker

Winter Qtr, ★Sec 3, Arr, Beach

Winter Qtr, ★Sec 4, Arr, Avery

Winter Qtr, ★Sec 5, Arr, Lawrenz

Winter Qtr, ★Sec 6, Arr, Johnson

Spring Qtr, ★Sec 7, Arr, Lawrenz

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**CI 5250 (formerly Elem 5376) CURRENT TRENDS IN EARLY CHILDHOOD EDUCATION.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Continuing needs of children in our changing culture; current practices and recent research; curriculum assessment techniques and evaluation of education materials. (Prereq teaching experience in kindergarten or primary or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Fall Qtr, ★○Sec 1, M, 4:30-8, PeikH 28, Hansen  
Spring Qtr, ★○Sec 2, M, 4:30-8, PeikH 28,  
Hansen

**CI 5252 (formerly Elem 5378) CONTEMPORARY PROGRAMS FOR YOUNG CHILDREN.** 1-3 credits (maximum 3 cr). 3 credits this offering, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Child growth and development aspects of preschool children in light of need for curriculum intervention programs; current trends, program evaluation, recent research. (Prereq MEd student in early childhood education. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Winter Qtr, ★○Sec 1, TTh, 4:45-6:15, NichH  
209, Carlson  
Spring Qtr, ★○Sec 2, TTh, 4:45-6:15, ChDev  
218, Carlson

**CI 5253 (formerly Elem 3379) COGNITIVE AND CREATIVE LEARNING IN EARLY CHILDHOOD EDUCATION.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Development approach to planning cognitive, language, and creative curriculum. **Must be taken A-F.** (Prereq CPsy 1301 OR 5301. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Fall Qtr, ★○Sec 1, T, 4:30-7, PeikH 46, Murphy  
Spring Qtr, ★○Sec 2, TTh, 4:45-6:15, PeikH 46,  
Murphy

**CI 5335 (formerly CISy 5151) INTRODUCTION TO INSTRUCTIONAL SYSTEMS AND TECHNOLOGY.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Examination of the historical foundations, contemporary issues, and research base of instructional systems. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Winter Qtr, ★○Sec 1, M, 4:30-8, PeikH 335,  
Hooper

**CI 5337 (formerly CISy 5209) PRINCIPLES AND PROCEDURES IN DESIGNING INSTRUCTION.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Major models of instructional development; generic components; design models; review of instructional design and learning environments. **Must be taken A-F.** (Prereq 5000. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Fall Qtr, ★○Sec 1, M, 4:30-8, PeikH 46, Sales

**CI 5351 (formerly CISy 5208) COMPUTER-BASED TOOLS FOR TEACHERS.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

The use of microcomputers for instructional materials generation, record keeping and classroom management tasks in K-12 classrooms. **May be taken S-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Winter Qtr, ★○Sec 1, Th, 4:30-8, PeikH 355,  
Lambrecht

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**CI 5362 (formerly CISy 5006) INTRODUCTION TO COMPUTER-BASED DESIGN.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40. (IS)

Introduction to designing computer-based instructional programs through programming. Students need not have a mathematics or science background. **Must be taken A-F.** (Prereq 5360 or CISy 5003 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Fall Qtr, ★○Sec 1, W, 4:30-8, PeikH 355,

Hooper

**CI 5364 (formerly CISy 5212) COMPUTER-BASED INSTRUCTION: DESIGN AND DEVELOPMENT.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Advanced principles and research in computer-based design and development. **Must be taken A-F.** (Prereq 5362 or CISy 5205 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension Students)

Spring Qtr, ★○Sec 1, Th, 4:30-8, PeikH 355,

Hooper

**CI 5367 (formerly CISy 5207) INTERACTIVE MULTIMEDIA INSTRUCTION.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Multimedia technologies; design and development of interactive instruction. **Must be taken A-F.** (Prereq 5361, 5336 or 5337 or 5363 or CISy 5004 and 5201 or 5205 or 5209 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension Students)

Winter Qtr, ★○Sec 1, T, 4:30-7:50, PeikH 355,

Salas

**CI 5401 (formerly Elem 5300) LITERATURE FOR THE ELEMENTARY SCHOOL.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Evaluative survey of books for children; research related to children's reading interests; selection of literature. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Winter Qtr, ★○Sec 1, T, 4:30-7, PeikH 315, Stan

Spring Qtr, ★○Sec 2, M, 4:30-7, PeikH 315,

Monson

**CI 5410 (formerly Elem 5331) TEACHING READING IN THE ELEMENTARY SCHOOL.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Describes and examines elementary school reading programs from a historical and foundations perspective. The present flux in reading curriculum theory and classroom practice is an evolutionary condition affected by contemporary changes in language research theory as well as significant social/cultural demographic changes. (Prereq 9 or in education. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Fall Qtr, ★○Sec 1, W, 4:30-7, PeikH 48, Watts

Spring Qtr, ★○Sec 2, W, 4:30-7, PeikH 48,

Watts

**CI 5411 (formerly Elem 5334) READING DIFFICULTIES: ASSESSMENT AND INSTRUCTION.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Causes, prevention, and correction; remedial practices useful to the classroom teacher, school counselor, and reading specialist. (Prereq 5410 or 5450 or Elem 5331 or SeEd 5344. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Spring Qtr, ★○Sec 1, W, 4:30-7:30, PeikH 46,

Taylor

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**CI 5413 TEACHING STUDENTS WITH READING DIFFICULTIES.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Assessment and tutoring of individual children who have difficulty learning in school. (Prereq 5172 or 5411 or Elem 5334 or Elem 5107. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Fall Qtr, ★●Sec 1, W, 4:30-7:30, PeikH 46, Taylor

**CI 5414 (formerly Elem 5337) BEGINNING READING INSTRUCTION.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

For teachers and specialists interested in initial teaching procedures, compares alternative methods of beginning instruction, emphasis on readiness programs, test-grouping patterns, language factors, and intensive instruction procedures to prevent reading failure. **Must be taken A-F.** (Prereq 3410 or Elem 3331 or elem teacher or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Fall Qtr, ★●Sec 1, T, 4:30-7, PeikH 48, Manning

Spring Qtr, ★●Sec 1, T, 4:30-7, PeikH 46, Manning

**CI 5415 (formerly Elem 5338) LITERARY DEVELOPMENT IN THE INTERMEDIATE GRADES.** 3 credits, \$Elem 5338, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

For teachers and specialists interested in teaching reading beyond the decoding stage; emphasis on comprehension strategies, basic study skills, reading in the content areas, and use of literature in reading program. **Must be taken A-F.** (Prereq 3410 or Elem 3331 or elem teaching experience or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Winter Qtr, ★●Sec 1, M, 4:30-7, PeikH 48, Watts

**CI 5420 (formerly Elem 5315) TEACHING WRITING IN THE ELEMENTARY SCHOOL.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Theory and research dealing with the writing process and application to development of an elementary school writing curriculum. (Prereq postbaccalaureate, MEd, or graduate student. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Winter Qtr, ★●Sec 1, Th, 4:30-7, PeikH 315, Phinney

Spring Qtr, ★●Sec 2, T, 4:30-7, PeikH 28, Phinney

**CI 5425 (formerly Elem 5316) TEACHING LANGUAGE ARTS IN THE ELEMENTARY SCHOOL.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Improvement of instruction, study of trends in English education. (Prereq 3316 or elementary teaching experience. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Fall Qtr, ★●Sec 1, Th, 4:30-7, PeikH 46, Phinney

**CI 5441 (formerly SeEd 5320) LITERATURE FOR ADOLESCENTS.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Reading and analysis of fiction and nonfiction; methods for critically assessing quality and appeal; appropriate for secondary English and social studies teachers and librarians. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Fall Qtr, ★●Sec 1, Th, 4:30-7, PeikH 31

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**CI 5450 (formerly SeEd 5344) TEACHING READING IN CONTENT AREAS.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Methods of accommodating to student abilities and facilitating reading in regular content classes. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)  
Spring Qtr, ★●Sec 1, T, 4:30-7:30, PeikH 315, Carberry

**CI 5451 (formerly SeEd 5175) SECONDARY REMEDIAL READING INSTRUCTION.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Principles and techniques for developing and conducting programs for secondary students seriously deficient in reading skills and methods of assessing such students' proficiency and progress. (Prereq 5450 or 5410 or equivalent, SeEd 5344. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Winter Qtr, ★●Sec 1, T, 4:30-7:30, PeikH 48, Carberry

**CI 5472 (formerly SeEd 5326) TEACHING FILM AND TELEVISION.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Current theory and methods of teaching critical response to film and television; techniques, genres, history, economics; integration and use of short film and Super-8 filmmaking with English and social studies teaching in the classroom. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Spring Qtr, ★●Sec 1, Th, 4:30-7, PeikH 48, Beach

**CI 5480 (formerly SeEd 5659) SCHOOL-RELATED PROJECTS IN ENGLISH EDUCATION AND READING** 1-6 credits, tuition\* each credit: Resident \$93.50; Non-resident \$271.15; Resident Graduate credit \$118; Non-resident Graduate credit \$259.60; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Individual or group work on curricular, instructional, or evaluation problems and projects applicable to school situations. (Prereq M.Ed. student in English education. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 3 Extension students)

Fall Qtr, ★●Sec 1, Arr, Beach  
Winter Qtr, ★●Sec 2, Arr, Beach  
Spring Qtr, ★●Sec 3, Arr, Beach

**CI 5502 (formerly Elem 5348) WORKSHOP: OUTDOOR SCIENCE EDUCATION.** 3 credits, §Elem 5348, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Classroom and fieldwork activities dealing with models, materials, and methods in the outdoor setting; consideration of broad topics such as ecological relationships, cyclic processes and change as well as more specific topics such as rocks and minerals, plants and animals, and stargazing. *Dates are subject to change; for current information, call Prof. Roger Johnson at (612) 624-7031. There will be an additional fee charged for materials and Long Lake weekend.* (Prereq elem teaching experience. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Winter Spec Term, ★●Sec 1, F, Jan. 26, 6-9; Sa, Jan. 27, 8:30 a.m.-4:30; Su, Jan. 28, 8:30 a.m.-4:30, Woodlake Nature Center, Richfield, F, Feb. 23, 8-10; Sa, Feb. 24, 8 a.m.-5; Su, Feb. 25, 8 a.m.-12, Long Lake Conservation Center, Aitkin, Minn. M, Mar. 4, 6-9, Woodlake Nature Center, Richfield. *No late fee through Jan. 19*

**CI 5504 (formerly Elem 5350) ELEMENTARY SCHOOL SCIENCE: MATERIALS AND RESOURCES.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Experiences in the use of educational materials and media common to the teaching of modern elementary school science. (Prereq elementary teaching experience or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Fall Qtr, ★●Sec 1, M, 4:30-7:30, PeikH 385, Johnson

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



**CI 5533 (formerly SeEd 5397) STUDIES IN SCIENCE EDUCATION.** 4 credits, \$8887, \$SeEd 5397, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Improvement of science teaching through application of research findings. (Prereq M.Ed. student or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students) Winter Qtr, ★●Sec 1, W, 4:30-7:30, PeikH 365, Lawrenz

**CI 5534 (formerly SeEd 5706) FOUNDATIONS OF SCIENCE EDUCATION.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Analysis of present practices in light of the historical and philosophical foundations of science education. (Prereq admission to M.A., M.Ed., or Ph.D. in education. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students) Spring Qtr, ★●Sec 1, W, 4:30-7:30, PeikH 385, Finley

**CI 5619 (formerly Elem 5319) TEACHING SECOND LANGUAGES AND CULTURES IN ELEMENTARY SCHOOLS.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Methods and materials; developing oral and written communication; consideration of alternatives in program format; preparation of materials; global awareness and cross-cultural experience; assessing children's language; children's literature, games, songs; developing units and lessons. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 20 Extension students)

Fall Qtr, ★●Sec 1, Sa, 9 a.m.-12, PeikH 215, Jorstad

**CI 5642 (formerly SeEd 5218) ASSESSMENT OF LEARNERS WITH LIMITED ENGLISH PROFICIENCY.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Social, political, and educational context. Evaluation vs. research and implications for bilingual

schooling, curriculum development, and materials section; existing methods for assessment of language proficiency and academic achievement. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students) Fall Qtr, ★●Sec 1, M, 4:40-8, PeikH 215, Walker

**CI 5652 (formerly SeEd 5122) TEACHING CULTURE: THEORY AND APPLICATION.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Analysis of the concept; related factors and materials for use in the classroom; culture shock; empathy; culture conflict, awareness, learning. (Prereq postbaccalaureate or graduate student. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Winter Qtr, ★●Sec 1, Th, 4:40-8, PeikH 215, Paige

**CI 5656 (formerly SeEd 5219) READING AND WRITING IN A SECOND LANGUAGE.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Reading comprehension and composing processes in a second language; relationship between first and second language comprehension and composing processes, between reading and writing, and between culture and reading comprehension and writing; politics of literacy; assessment of second language literacy. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Fall Qtr, ★●Sec 1, W, 4:40-8, PeikH 215, Tedick

**CI 5657 (formerly SeEd 5385) SPEAKING AND LISTENING IN A SECOND LANGUAGE.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Theories and methods of teaching language as communication in oral and aural modes; planning student interaction; classroom organization for learning and acquisition. Students complete reflective analyses of lessons. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Winter Qtr, ★●Sec 1, Sa, 9 a.m.-12, PeikH 215, Jorstad

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**CI 5658 (formerly SeEd 5382) SECOND LANGUAGE TESTING, ASSESSMENT, AND EVALUATION.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Language proficiency assessment, English as a second language, bilingual education; oral interviews; testing communicative abilities; standardized language measures; building test items; evaluating programs; aptitude and attitude measurement. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)  
Winter Qtr, ★●Sec 1, W, 4:40-8, PeikH 215

**CI 5662 (formerly SeEd 5189) CRITICAL ISSUES IN SECOND LANGUAGE CURRICULUM.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Development of competencies in curriculum and materials construction; application to lessons, units, modules, courses, levels of instruction in ongoing programs of second language acquisition in schools. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Spring Qtr, ★●Sec 1, W, 4:40-8:05, PeikH 215, Tedick

**CI 5669 (formerly SeEd 5185) SCHOOL AND PROFESSIONAL BASED EXPERIENCES IN SECOND LANGUAGES AND CULTURES.** 1-12 credits (max 12 credits), §SeEd 5185, tuition\* each credit: Resident \$93.50; Non-resident \$271.15; Resident Graduate credit \$118; Non-resident Graduate credit \$259.60; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Opportunity for teachers to work together on curricular, instructional, or evaluation problems; internship experiences; participation in professional activities. (Prereq MEd students only. Qualified students may register for graduate credit at the University of Minnesota. Limited to 6)

Fall Qtr, ★Sec 1, Arr, Jorstad

Fall Qtr, ★Sec 2, Arr, Paige

Fall Qtr, ★Sec 3, Arr, Tedick

Fall Qtr, ★Sec 4, Arr, Walker

Winter Qtr, ★Sec 5, Arr, Jorstad

Winter Qtr, ★Sec 6, Arr, Paige

Winter Qtr, ★Sec 7, Arr, Walker

Winter Qtr, ★Sec 8, Arr, Tedick  
Spring Qtr, ★Sec 9, Arr, Jorstad  
Spring Qtr, ★Sec 10, Arr, Paige  
Spring Qtr, ★Sec 11, Arr, Walker  
Spring Qtr, ★Sec 12, Arr, Tedick

**CI 5680 (formerly Elem 5320) PRACTICUM: TEACHING SECOND LANGUAGES AND CULTURES IN ELEMENTARY SCHOOLS.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Minimum of three hours weekly of supervised teaching and observation in elementary schools. **Must be taken S-N.** (Prereq 5619 or ¶5619 or Elem 5319, #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Fall Qtr, ★●Sec 1, Arr, Jorstad, Tedick, Walker  
Winter Qtr, ★●Sec 2, Arr, Jorstad, Tedick, Walker  
Spring Qtr, ★●Sec 3, Arr, Jorstad, Tedick, Walker

**CI 5690 (formerly SeEd 5351) DIRECTED STUDY IN SECOND LANGUAGES AND CULTURES.** 1-6 credits (max 6 credits), §SeEd 5351, tuition\* each credit: Resident \$93.50; Non-resident \$271.15; Resident Graduate credit \$118; Non-resident Graduate credit \$259.60; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Individual or group work on curricular, instructional, or evaluation problems. (Prereq educ or grad student. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 3 Extension students)

Winter Qtr, ★●Sec 1, Arr, Jorstad

**CI 5730 (formerly Elem 5361) SOCIAL STUDIES FOR THE IN-SERVICE ELEMENTARY/MIDDLE SCHOOL.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Content and organization of social studies programs; programs of understanding, improving the learning situation, and effective use of materials. (Prereq 5110 or Elem 3101 or equivalent; postbaccalaureate students only. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Winter Qtr, ★●Sec 1, W, 4:30-7:30, PeikH 48, Cogan

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**CI 5747 (formerly Elem 5164, SeEd 5164) GLOBAL EDUCATION: CONTENT AND PRACTICE.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Designed to help classroom teachers, curriculum specialists, and administrators assess current issues, methods of instruction, and materials in the area of global/environmental education. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Fall Spec Term, ★●Sec 1, T, 4-8, Sept. 19, Nov. 28; Sa, 8 a.m.-4, Sept. 30, Oct. 14, 28, Nov. 11, PeikH 325, Cogan, Finley

**CI 5760 (formerly SeEd 5152) SOCIAL STUDIES FOR THE IN-SERVICE MIDDLE/SECONDARY SCHOOL TEACHER.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Provides in-service middle and secondary social studies teachers with a broader understanding of each of the social science disciplines, with a specific focus on the following: central concepts and generalizations, methods of inquiry, pedagogical techniques and resources; required of all M.A., M.Ed., and Ph.D. candidates. **Must be taken A-F.** (Prereq in-service teacher or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Fall Qtr, ★●Sec 1, W, 4:30-8, PeikH 155, Avery

**CI 8132 (formerly CISy 8103) CURRICULUM AND INSTRUCTION CORE: RESEARCH METHODS.** 3 credits, tuition\*: Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Purposes, approaches, and assumptions related to methods of educational research, such as descriptives correlational, case-study, experimental, ethnographic, and developmental. Seminar. **Must be taken A-F.** (Prereq PhD student or #. Open only to students admitted to the University of Minnesota Graduate School. A joint Day/Extension class limited to 12 Extension students)

Spring Qtr, ★●Sec 1, M, 4:30-7, PeikH 33, Freedman

**CI 8135 (formerly CISy 8416) SEMINAR: INTERDISCIPLINARY CURRICULUM ISSUES.** 4 credits, tuition\*: Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Problems and issues in curriculum theory and research. (No prereq. Open only to students admitted to the University of Minnesota Graduate School. A joint Day/Extension class limited to 12 Extension students)

Winter Qtr, ★●Sec 1, M, 4:30-7, PeikH 25, Freedman

**CI 8147 (formerly CISy 8620) THE DOMAIN OF CURRICULUM THEORY AND RESEARCH: ALTERNATIVE PARADIGMS AND METHODS.** 4 credits, tuition\*: Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Assessment of inquiry traditions, research methods, and exemplar studies in empirical-analytic, deliberative, and reconceptualist traditions of curriculum. Includes survey of quantitative and qualitative research methods and other inquiry as applied to curriculum questions. **Must be taken A-F.** (No prereq. Open only to students admitted to the University of Minnesota Graduate School. A joint Day/Extension class limited to 8 Extension students)

Fall Qtr, ★●Sec 1, W, 4:30-7:15, PeikH 31, Harris

**CI 8190 (formerly Elem 8991) PROBLEMS: IMPROVEMENT OF INSTRUCTION.** Credits arranged, tuition\* each credit: Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

For students qualified to make intensive studies of problems related to school supervision. (Prereq #. Open only to students admitted to the University of Minnesota Graduate School. A joint Day/Extension class limited to 1 Extension student)

Spring Qtr, ★●Sec 1, Arr, Manning

**CI 8361 (formerly CISy 8411) ADVANCED COURSEWARE AND DESIGN: ISSUES.** 4 credits, tuition\*: Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Examination of the most recent trends and issues in the research and development of computer-based instructional materials. (Prereq 5364 or 5212 or #. Open only to students admitted to the University of Minnesota Graduate School. A joint Day/Extension class limited to 10 Extension students)

Spring Qtr, ★●Sec 1, T, 4:30-8, PeikH 365, Sales

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**CI 8630 (formerly SeEd 8188) RESEARCH IN SECOND LANGUAGES AND CULTURES EDUCATION.** 4 credits, tuition\*: Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Identification and retrieval of information; preparation of research proposals, papers, and theses; examination of empirical research models; discussion of needed research; designing an individual study. (No prereq. Open only to students admitted to the University of Minnesota Graduate School. A joint Day/Extension class limited to 12 Extension students)

Spring Qtr, ★●Sec 1, Sa, 9 a.m.-12, PeikH 215, Jorstad

**Day School Classes**—In addition to the Extension classes listed above, day school classes are sometimes offered to educators during late afternoon, early evening, and weekend hours. For registration information about day school College of Education and Human Development courses, see page 160 or call 625-6501.

### Dance (Dnce)

(106 Norris Hall: 624-5060)  
Department of Theatre Arts and Dance  
College of Liberal Arts

**NOTE:** Students with questions about Dnce courses should call Zoe Sealy, Extension Classes Dance Coordinator, at 626-7210.

Textbooks for most Dnce courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

Paul Abdella, Teaching Specialist  
Diane Aldis, Teaching Specialist  
Scott Anderson, Teaching Specialist  
Joe Chvala, Teaching Specialist  
Susana DiPalma, Teaching Specialist  
Diane Elliot, Teaching Assistant  
Mary Harding, Teaching Specialist  
Lester Johnson, Teaching Specialist  
Morris Johnson, Teaching Specialist  
Mary B. Lampe, Associate Professor  
Barbara Loeb, Teaching Specialist  
Rita Mustaphi, Teaching Specialist  
Ranee Ramaswamy, Teaching Specialist  
Clayton Schanilec, Teaching Specialist  
Cassandra Shore, Teaching Specialist  
Linda Stoen, Teaching Specialist

**Joint Day/Extension Classes**—You may register through Extension for most day school classes scheduled before 4 p.m. in Dance. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before registration for that quarter begins.

*It is assumed that the health of adults registering for classes will be equal to the demands of the activities in which they are to participate. Students are required to sign a "health waiver" form on the first day of class.*

**Dance (Dnce) courses (numbered through 1499) may be taken S-N.**

*Course sections in the Department of Dance will be offered only if there is sufficient enrollment. (Early registration for all courses is necessary.)*

**Dnce 1001 FUNDAMENTALS OF MODERN DANCE I.** 1 credit, tuition\* (includes \$30 special fee); Resident \$109.50; Non-resident \$260.55.

Introduction to fundamentals of modern dance technique. (No prereq. Limited to 25)

Fall Qtr, ★Sec 1, TTh, 5:20-6:50, NorrisH 153, Aldis

**Dnce 1002 FUNDAMENTALS OF MODERN DANCE II.** 1 credit, tuition\* (includes \$30 special fee); Resident \$109.50; Non-resident \$260.55.

Introduction to the fundamentals of modern dance techniques, level two. Emphasis on exploring rhythms and dynamics underlying movement. (Prereq 1001 or equivalent. Limited to 25)

Winter Qtr, ★Sec 1, TTh, 5:20-6:50, NorrisH 153, Aldis

**Dnce 1004 FUNDAMENTALS OF BALLET I.** 1 credit, tuition\* (includes \$30 special fee); Resident \$109.50; Non-resident \$260.55. Resident \$103.50; Non-resident \$243.15.

Introduction to the fundamentals of classical ballet techniques including barre and center work. (No prereq. Limited to 20)

Fall Qtr, ★Sec 1, MW, 5:20-6:50, NorrisH 67, Harding

Winter Qtr, ★Sec 2, MW, 5:20-6:50, NorrisH 67, Harding

**Dnce 1005 FUNDAMENTALS OF BALLET II.** 1 credit, tuition\* (includes \$30 special fee); Resident \$109.50; Non-resident \$260.55.

Fundamentals of classical ballet including barre, center work, and combinations; level two. (Prereq 1004 or equivalent. Limited to 20)

Spring Qtr, ★Sec 1, MW, 5:20-6:50, NorrisH 67, Harding

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**Dnce 1007 FUNDAMENTALS OF JAZZ I.** 1 credit, tuition\* (includes \$30 special fee): Resident \$109.50; Non-resident \$260.55.

Basic skills of jazz dance. (No prereq. Limited to 16)

Fall Qtr, ★Sec 1, TTh, 5:30-7, RarigC 10, Johnson

**Dnce 1008 FUNDAMENTALS OF JAZZ II.** 1 credit, tuition\* (includes \$30 special fee): Resident \$109.50; Non-resident \$260.55.

Basic skills of jazz dance and its origins, level two. (Prereq 1007 or equivalent. Limited to 16)

Winter Qtr, ★Sec 1, TTh, 5:30-7, RarigC 10, Johnson

**Dnce 1009 FUNDAMENTALS OF JAZZ III.** 1 credit, tuition\* (includes \$30 special fee): Resident \$109.50; Non-resident \$260.55.

Basic skills of jazz dance and its origins with emphasis on use of rhythms and phrasing. (Prereq 1008 or equivalent. Limited to 16)

Spring Qtr, ★Sec 1, TTh, 5:30-7, RarigC 10, Johnson

**Dnce 1031 BALLROOM DANCE I.** 1 credit, tuition\* (includes \$30 special fee): Resident \$109.50; Non-resident \$260.55.

Elementary steps and variations of the foxtrot, lindy, waltz, tango, cha-cha, rumba, and samba. (No prereq. Sec 1 and 2 meet concurrently; sec 3 and 4 meet concurrently; sec 5 and 6 meet concurrently. Limited to 25 each section)

Fall Qtr, ★Sec 1, M, 7-9, NorrisH 151, Lampe (men only)

Fall Qtr, ★Sec 2, M, 7-9, NorrisH 151, Lampe (women only)

Spring Qtr, ★Sec 3, M, 7-9, NorrisH 151, Lampe (men only)

Spring Qtr, ★Sec 4, M, 7-9, NorrisH 151, Lampe (women only)

**Dnce 1032 BALLROOM DANCE II.** 1 credit, tuition\* (includes \$30 special fee): Resident \$109.50; Non-resident \$260.55.

Second level of the foxtrot, lindy, waltz, tango, cha-cha, rumba, and samba with emphasis on style. (Prereq 1031 or equivalent. Sec 1 and 2 meet concurrently. Limited to 25 each section)

Winter Qtr, ★Sec 1, M, 7-9, NorrisH 151, Lampe (men only)

Winter Qtr, ★Sec 2, M, 7-9, NorrisH 151, Lampe (women only)

**Dnce 1033 BALLROOM DANCE III.** 1 credit, tuition\* (includes \$30 special fee): Resident \$109.50; Non-resident \$260.55.

Advanced patterns and styling for the foxtrot, lindy, waltz, tango, cha-cha, rumba, and samba. (Prereq 1032 or equivalent. Sec 1 and 2 meet concurrently. Limited to 25 each section)

Winter Qtr, ★Sec 1, W, 7-9, NorrisH 151, Lampe (men only)

Winter Qtr, ★Sec 2, W, 7-9, NorrisH 151, Lampe (women only)

**Dnce 1034 INTERNATIONAL FOLK DANCE I.** 1 credit, tuition\* (includes \$30 special fee): Resident \$109.50; Non-resident \$260.55.

Introductory course in International Folk Dance. Students will learn folk dances from many different cultures and countries in the world. Basic folk locomotor movements such as schottischje, polka, skip, waltz, and grapevine, as well as a variety of dance forms such as circle dance and line dance. (No prereq. Limited to 30)

Fall Qtr, ★Sec 1, W, 7-9, NorrisH 151, Loeb

Spring Qtr, ★Sec 2, W, 7-9, NorrisH 151, Loeb

**Dnce 1036 WORLD DANCE TECHNIQUES—AFRO-CARIBBEAN.** 1 credit, tuition\* (includes \$30 special fee): Resident \$109.50; Non-resident \$260.55.

An introduction to the music, rhythms, and dance styles of the Caribbean Islands. (No prereq. Limited to 30)

Fall Qtr, ★Sec 1, MW, 5:20-6:50, NorrisH 153, Johnson

Spring Qtr, ★Sec 2, MW, 5:20-6:50, NorrisH 153, Johnson

**Dnce 1037 WORLD DANCE TECHNIQUES—AFRO-CARIBBEAN II.** 1 credit, tuition\* (includes \$30 special fee): Resident \$109.50; Non-resident \$260.55.

The music, rhythms, and dance styles of the Caribbean Islands with emphasis on more intricate and longer phrases of movement. (Prereq 1036 or equivalent. Limited to 30)

Winter Qtr, ★Sec 2, MW, 5:20-6:50, NorrisH 153, Johnson

**Dnce 1077 BEGINNING TAPI.** 1 credit, tuition\* (includes \$30 special fee): Resident \$109.50; Non-resident \$260.55.

The basics of tap; learning fundamental terms and basic rhythm structures. (No prereq. Limited to 18)

Fall Qtr, ★Sec 1, TTh, 5:20-6:20, PeikG 65, Chvala

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Dnce 1078 BEGINNING TAP II.** 1 credit, tuition\* (includes \$30 special fee): Resident \$109.50; Non-resident \$260.55.

The basics of tap; fundamental terms, basic rhythms, stock steps, and standard time steps. (Prereq 1077 or equivalent. Limited to 18)

Winter Qtr, ★Sec 1, TTh, 5:20-6:20, PeikG 65, Chvala

**Dnce 1079 BEGINNING TAP III.** 1 credit, tuition\* (includes \$30 special fee): Resident \$109.50; Non-resident \$260.55.

The basic of tap; emphasis on clarity of sound and rhythm. (Prereq 1078 or equivalent. Limited to 18)

Spring Qtr, ★Sec 1, TTh, 5:20-6:20, PeikG 65, Chvala

**Dnce 1110 DANCE TOPICS: WORLD DANCE TECHNIQUES—INDIAN CLASSICAL DANCE.** 1 credit, tuition\* (includes \$30 special fee): Resident \$109.50; Non-resident \$260.55.

The classical dances of India, including Bharatanatyam (South Indian) and Kathak (North Indian). (No prereq. Limited to 16)

Fall Qtr, ★Sec 1, MW, 5:30-7, PeikG 65, Mustaphi, Ramaswamy

**Dnce 1110 DANCE TOPICS: STEP-DANCE FROM AROUND THE WORLD.** 1 credit, tuition\* (includes \$30 special fee): Resident \$109.50; Non-resident \$260.55.

Studio course covering six traditional percussive dance styles: French Canadian step-dance, Appalachian clogging, African hambone, tap, English wooden shoe clogging, and Irish step-dance. Students will learn vocabulary and choreography, and gain a basic understanding of historical and stylistic relationships between each. (Prereq 1077 or equivalent. Limited to 18)

Fall Qtr, ★Sec 2, TTh, 6:30-7:30, PeikG 65, Schanilec

**Dnce 1110 DANCE TOPICS: YOGA.** 1 credit, tuition\* (includes \$30 special fee): Resident \$109.50; Non-resident \$260.55.

Yoga is an ancient Eastern movement tradition which integrates the body, breath, and mental focus through a series of specific movement postures. Regular practice of yoga can facilitate the release of tension, improve alignment and physical health. Yoga also helps to maintain a state of well being, clarity, and calm. (No prereq. Limited to 30)

Fall Qtr, ★Sec 3, T, 7:30-9, NorrisH 153, Anderson  
Winter Qtr, ★Sec 4, T, 7:30-9, NorrisH 153, Anderson

Spring Qtr, ★Sec 5, T, 7:30-9, NorrisH 153, Anderson

**Dnce 1110 DANCE TOPICS: INTRODUCTION TO ARABIC DANCE.** 1 credit, tuition\* (includes \$30 special fee): Resident \$109.50; Non-resident \$260.55.

The many techniques and styles of Arabic dance. Basics of the sinuous serpentine movements and expressive rhythmic isolations of the Raks al-Sharki (Eastern Dance), the classical women's performance dance of the Southern Mediterranean basin. Regional folk styles including the distinctive dances of Lebanon, the Arabian Gulf, Egypt, and Tunisia. Discussions and examples of Arabic music and rhythms as they apply to dance. (No prereq. Limited to 16)

Winter Qtr, ★Sec 6, MW, 5:30-7, RarigC 10, Shore

**Dnce 1110 DANCE TOPICS: FUNDAMENTALS OF APPALACHIAN CLOGGING.** 1 credit, tuition\* (includes \$30 special fee): Resident \$109.50; Non-resident \$260.55.

Exploring the rudiments of clogging technique and its origin. (No prereq. Limited to 18)

Winter Qtr, ★Sec 7, TTh, 6:30-7:30, PeikG 65, Schanilec

**Dnce 1110 DANCE TOPICS: WORLD DANCE TECHNIQUES—FLAMENCO.** 1 credit, tuition\* (includes \$30 special fee): Resident \$109.50; Non-resident \$260.55.

The classical dance of Spain. (No prereq. Limited to 16)

Spring Qtr, ★Sec 8, MW, 5:30-7, PeikG 65, DiPalma

**Dnce 1110 DANCE TOPICS: MODERN REPERTORY AND PERFORMANCE.** 1 credit, tuition\* (includes \$30 special fee): Resident \$109.50; Non-resident \$260.55.

Focus is on the development of a dance performance piece. Designed as a combination technique class and rehearsal. (Prereq 1001, 1002 or equivalent. Limited to 25)

Spring Qtr, ★Sec 9, TTh, 5:20-6:50, NorrisH 153, Aldis

**Dnce 1110 DANCE TOPICS: T'AI CHI CH'UAN.** 1 credit, tuition\* (includes \$30 special fee): Resident \$109.50; Non-resident \$260.55.

A slow-motion exercise which works out the complete muscular and nervous system as well as benefiting the internal organs. The gentle movements calm the mind and breath as well as unifying the body into one unit. This class will include some Daoist warm-up exercises, Ch'i-Kung breathing exercises, and an introduction to the formal T'ai Chi movements. (No prereq. Meets concurrently with PE 1110. Limited to a combined total of 25)

Spring Qtr, ★Sec 10, MW, 7-8:30, NorrisH 153, Abdella

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**Dnce 1110 DANCE TOPICS: TAP WORKSHOP.** 1 credit, tuition\* (includes \$30 special fee): Resident \$109.50; Non-resident \$260.55.

Focus is on the development of a dance performance piece. Designed as a combination technique class and rehearsal. (Prereq 1079 or equivalent. Limited to 18)

Spring Qtr, ★Sec 11, TTh, 6:30-7:30, PeikG 65, Chvala

**Dnce 3330 TOPICS: INTRODUCTION TO BODY-MIND CENTERING.** 2 credits, tuition\* (includes \$30 special fee): Resident \$202; Non-resident \$528.80.

A new approach to movement and the body developed by Bonnie Bainbridge Cohen, O.T. Body-mind centering integrates cognitive and intuitive learning styles and incorporates experiential anatomy and developmental movement to give students immediate and direct access to the body-mind process. Its benefits include increased awareness of body sensation, an expanded range of movement choices, emotional and physical healing, and increased creativity. This work is applied in the fields of healing, movement education, and the arts. Includes moving, hands-on partnering, discussion, and processing. Required texts: *Sensing, Feeling, and Action* and *The Anatomy Coloring Book*. (No prereq. Limited to 18)

Winter Qtr, ★Sec 1, M, 5:30-8, PeikG 65, Elliot

**Dnce 3330 TOPICS: DANCE FOR THE ATHLETE.** 2 credits, tuition\* (includes \$30 special fee): Resident \$202; Non-resident \$528.80.

Dance skills for athletes which develop flexibility, strength, speed, and balance. Barre and floor work will be included. (No prereq. Meets concurrently with Kin 3330. Limited to a combined total of 20)

Winter Qtr, ★Sec 2, MW, 7-9, NorrisH 67, Stoen

**Dnce 3334 BODYWORK I: MOVEMENT AS COMMUNICATION.** 2 credits, tuition\* (includes \$30 special fee): Resident \$202; Non-resident \$528.80.

Principles of techniques of bodywork including applications within wellness/stress management fields. *Students will be required to purchase a course packet from Copies on Campus as a text.* (No prereq. Limited to 20)

Fall Qtr, ★Sec 1, Th, 7-9, NorrisH 67, Aldis

**Dnce 3335 BODYWORK II: EXPLORING THE ARTICULATE BODY.** 2 credits, tuition\* (includes \$30 special fee): Resident \$202; Non-resident \$528.80.

Further study in depth of the body's potential for healthy and efficient movement patterns through movement experiences and discussion. Each unit

will explore concepts from anatomy, kinesiology, and contemporary body therapies (Somatics) to learn about specific areas of the body, their function, expressive potential, and relationship to other areas of the body. *Students will be required to purchase a course packet from Copies on Campus as a text.* (Prereq 3334 or #. Limited to 20)

Spring Qtr, ★Sec 1, Th, 7-9, NorrisH 67, Loeb

## Danish

(See Scandinavian Languages)

## Decision Sciences (DSci)

See Information and Decision Sciences, page 250; and Operations and Management Science, page 304.

## Dentistry

For information on noncredit conferences or workshops in dentistry, please contact the director, Lynda Young Kreisler, Continuing Dental Education, Room 6-406 Moos Health Science Tower, 515 Delaware Street S.E., University of Minnesota, Minneapolis 55455; telephone 625-1418.

## Design, Housing, and Apparel (DHA)

(240 McNeal Hall: 624-9700)

### College of Human Ecology

**PLEASE NOTE:** All courses previously offered as Dsgn, Hsg, and TexC courses are now offered as DHA courses.

Textbooks for most DHA courses are available at University of Minnesota Bookstore—St. Paul (624-9200)

### Restrictions in DHA classes

1. Registration in any DHA class after the first class meeting must be accompanied by the instructor's written permission.
2. You must attend the entire first DHA class session or your space in that class will be forfeited.
3. Students who do not attend the first class session will lose their place in the course.
4. Design studio courses require the student to spend a minimum of two hours per week on projects for each hour spent in class.

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

5. Some DHA classes require additional fees which cover part of the cost of expendable materials, breakage, and special facilities. Students may pay this fee at the Extension Classes Cashier's Office, 138 Westbrook Hall. In addition, some courses may also require the purchase of special tools or supplies not included in the tuition or course fees printed with each course.

6. Several courses in Design Communication and Interior Design require the use of a computer. Printing computer output through University computer labs requires a fee; printer cards can be obtained through the lab or the St. Paul Bursar's Office.

7. Students intending to pursue a degree program in Design Communication or Interior Design should contact a prospective student adviser in the College of Human Ecology (624-1717). Students should not assume that courses listed in the *Extension Classes Bulletin* constitute a complete program. Program bulletins are available from the College of Human Ecology. Design Communication and Interior Design students are required to pass a portfolio review following completion of basic foundation courses, prior to taking any specified upper division courses. Contact an adviser for details.

(See also Art; and Compleat and Practical Scholar noncredit courses)

**St. Paul Escort Service**—An escort service is now available on the St. Paul campus. Students who want a University security escort to walk with them from campus buildings to parking lots may call 624-WALK 24 hours a day; monitors are primarily available between 6 p.m. and 1 a.m.

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in DHA. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**DHA 1211 (formerly TexC 1211) INTRODUCTION TO RETAIL MERCHANDISING.** 4 credits, §TexC 1641, §GC 1511, §GC 1548, tuition\*: Resident \$318; Non-resident \$922.20. (IS)

Orientation to types of retailers; identification of and research on the retail consumer; retail functions including management and merchandise control. (No prereq. Meets concurrently with GC 1548. Limited to a combined total of 35)

Spring Qtr, ★Sec 1, TTh, 6:30-8:30, McNH 376, StP Campus

**DHA 1261 (formerly Dsgn 1261) CLOTHING DESIGN STUDIO II (formerly Fashion Illustration).** 4 credits, §Dsgn 1543, tuition\* (includes \$10 course fee): Resident \$328; Non-resident \$932.20. Human figure sketches and fashion illustration as a form of communication. Emphasis on color, proportion, cut, and fabric detail. (No prereq. Limited to 22)

Fall Qtr, ★Sec 1, TTh, 3:30-6:20, McNH 258, StP Campus

Spring Qtr, ★Sec 2, MW, 3:30-6:20, McNH 262, StP Campus

**DHA 1300 (formerly Dsgn 1300) INTRODUCTION TO DESIGN.** 3 credits, §1501, tuition\*: Resident \$238.50; Non-resident \$691.65.

Study of basic design processes, the elements, principles, evaluation, and history of design in global perspective. (No prereq)

Spring Qtr, Sec 1, M, 6:30-9:20, McNH 33, StP Campus

**DHA 1301 (formerly Dsgn 1301) INTRODUCTION TO VISUAL COMMUNICATION AND GRAPHIC DESIGN.** 4 credits, §1201, tuition\* (includes \$20 course fee): Resident \$338; Non-resident \$942.20.

Overview of advertising communications process and creative procedure, terminology, and technology. Explores copywriting, design, typography, production, color separating, printing, photography, and television. Emphasis on designer's relationship with the other specialists. (No prereq. Limited to 20)

Fall Qtr, ★Sec 1, TTh, 3:30-5:30, ClaOff B42, StP Campus

Winter Qtr, ★Sec 2, MW, 6:30-8:30, ClaOff B30, StP Campus

Winter Qtr, ★Sec 3, TTh, 6:30-8:30, ClaOff B30, StP Campus

Spring Qtr, ★Sec 4, TTh, 6:30-8:30, ClaOff B25, StP Campus

**DHA 1302 DESIGN PROCESS: CREATIVITY.** 4 credits, §1202, tuition\* (includes \$20 course fee): Resident \$338; Non-resident \$942.20.

Overview of creative processes, application to graphic design and creative problem solving. Emphasis on ideas, visual communication of concepts. (Prereq Design, Housing, or Apparel major or pre-major. A joint Day/Extension class limited to 20)

Fall Qtr, ★Sec 1, MW, 3:30-6:20, McNH 262, StP Campus

Winter Qtr, ★Sec 2, TTh, 3:30-6:20, McNH 262, StP Campus

Spring Qtr, ★Sec 3, MW, 6:30-9:20, McNH 262, StP Campus

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



**DHA 1306 (formerly Dsgn 1306) SPATIAL LOGIC FOR DESIGNERS.** 4 credits, \$1206, tuition\* (includes \$20 course fee): Resident \$338; Non-resident \$942.20.

Drafting, orthographic projection, and scale drawing fundamentals. Emphasizes use of geometry in mechanical construction of 1, 2, 3 point perspective; methods of visually communicating technical, financial, and statistical information. (Prereq Pre-DHA or DHA major. Limited to 20)

Fall Qtr, ★Sec 1, TTh, 3:30-6:20, McNH 480, StP Campus (A joint Day/Extension class)

Winter Qtr, ★Sec 2, TTh, 6:30-9:20, McNH 258, StP Campus

**DHA 1323 (formerly Dsgn 1323) DESIGN PROCESS: DRAWING I.** 4 credits, \$1523, tuition\*: Resident \$318; Non-resident \$922.20.

Problem solving in drawing with application of design elements and principles. Assignments done both in and out of design studio. (Prereq Pre-DHA or DHA major. Limited to 20)

Fall Qtr, ★Sec 1, TTh, 6:30-9:20, McNH 258, StP Campus

Fall Qtr, ★Sec 2, MW, 3:30-6:20, McNH 258, StP Campus (A joint Day/Extension class limited to 11 Extension students)

Winter Qtr, ★Sec 3, TTh, 3:30-6:20, McNH 258, StP Campus

Spring Qtr, ★Sec 4, TTh, 6:30-9:20, McNH 258, StP Campus

**DHA 1325 (formerly Dsgn 1325) DESIGN PROCESS: TWO DIMENSIONAL DESIGN I.** 4 credits, \$1525, tuition\*: Resident \$318; Non-resident \$922.20.

Experiments with principles of two-dimensional design. (Prereq Pre-DHA or DHA major. Limited to 20)

Fall Qtr, ★Sec 1, TTh, 3:30-6:20, McNH 262, StP Campus

Spring Qtr, ★Sec 2, MW, 3:30-6:20, McNH 258, StP Campus

**DHA 1328 (formerly Dsgn 1328) DESIGN PROCESS: COLOR.** 4 credits, \$1528, tuition\* (includes \$20 course fee): Resident \$338; Non-resident \$942.20.

Study of color concepts and their applications to design. Students will also be required to purchase supplies for this class which probably will exceed \$125. (Prereq 1501, or 1300, 1523 or 1323, or 1525 or 1325 or their equivalents, Pre-DHA or DHA major. Limited to 20)

Winter Qtr, ★Sec 1, MW, 3:30-6:20, McNH 262, StP Campus

Spring Qtr, ★Sec 2, TTh, 6:30-9:20, McNH 262, StP Campus

**DHA 1331 (formerly Dsgn 1331) SURFACE-FABRIC DESIGN I.** 4 credits, \$1531, tuition\* (includes \$45 course fee): Resident \$363; Non-resident \$967.20.

Exploration of surface pattern and composition with varied media and materials: dyeing, resist, batik, stencil, block printing and others. (Prereq 1523 or 1323, 1525 or 1325, 1300 or their equivalents, Pre-DHA or DHA major. Limited to 18)

Winter Qtr, ★Sec 1, MW, 6:30-9:20, plus arr, McNH B9, StP Campus

Spring Qtr, ★Sec 2, TTh, 3:30-6:20, plus arr, McNH B9, StP Campus

**DHA 1334 INTRODUCTION TO COMPUTER APPLICATIONS FOR THE DESIGNER.** 2 credits, tuition\* (includes \$20 course fee): Resident \$179; Non-resident \$481.10.

Introduction to the Macintosh computer and basic programs used in visual communications, including desktop publishing, drawing, file management, and options for output. **Must be taken A-F.** (Prereq Pre-Dsgn Comm. Limited to 18.)

Fall Qtr, ★Sec 1, T, 6:30-9:20, McNH 305 (Mac Lab), StP Campus

Fall Qtr, ★Sec 2, Th, 6:30-9:20, McNH 305 (Mac Lab), StP Campus

Winter Qtr, ★Sec 3, M, 3:30-6:20, McNH 305 (Mac Lab), StP Campus (A joint Day/Extension class)

Winter Qtr, ★Sec 4, W, 3:30-6:20, McNH 305 (Mac Lab), StP Campus

Spring Qtr, ★Sec 5, T, 6:30-9:20, McNH 305 (Mac Lab), StP Campus

Spring Qtr, ★Sec 6, Th, 6:30-9:20, McNH 305 (Mac Lab), StP Campus

(See also PSch 0701, Layout and Page Design for Desktop Publishing)

**DHA 1621 (formerly Dsgn 1621) INTERMEDIATE DRAFTING.** 4 credits, \$1550, tuition\* (includes \$20 course fee): Resident \$338; Non-resident \$942.20.

Intermediate-level drafting instruction in paraline drawing, perspective drawing, and architectural dimensioning. (Prereq demonstrated proficiency in basic drafting techniques. Limited to 20)

Fall Qtr, ★Sec 1, MWF, 3:30-5:20, McNH 480, StP Campus

Spring Qtr, ★Sec 2, MWF, 3:30-5:20, McNH 480, StP Campus

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**DHA 1641 (formerly Dsgn 1641) INTERIOR DESIGN: STUDIO I.** 4 credits, \$1554, tuition\* (includes \$20 course fee): Resident \$338; Non-resident \$942.20.

Application of design elements and principles to interior design problems, including two-dimensional projects, scale models, and three-dimensional design experiments in the space laboratory. (Prereq 1300, 1323, 1328, 1621. Pre-DHA or DHA major. Limited to 20)

Fall Qtr, ★Sec 1, TTh, 3:30-6:20, McNH 475, StP Campus

Winter Qtr, ★Sec 2, TTh, 6:30-9:20, McNH 480, StP Campus

**DHA 1642 (formerly Dsgn 1642) INTERIOR DESIGN: STUDIO II.** 4 credits, \$1555, tuition\* (includes \$20 course fee): Resident \$338; Non-resident \$942.20.

Problems in designing for interior space needs with emphasis on behavioral concerns related to interiors. (Prereq 1641. Limited to 20)

Winter Qtr, ★Sec 1, M, 3:30-6:20; WF, 3:30-5:20, McNH 475, StP Campus

Spring Qtr, ★Sec 2, M, 3:30-6:20; WF, 3:30-5:20, McNH 475, StP Campus

**DHA 3117 (formerly Dsgn 3117) HISTORY OF COSTUME: ORIGINS THROUGH 18TH CENTURY.** 3 credits, tuition\*: Resident \$258; Non-resident \$748.20.

Emphasis on European costume. (Prereq general art history course. A joint Day/ Extension class)

Fall Qtr, ○Sec 1, MW, 4-5:15, McNH 376, StP Campus

**DHA 3214 APPAREL INDUSTRIES.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Production processes and interdependence of textile and related industries. Influence of current national and international trends on consumer demands as reflected in product development, merchandising, marketing, and distribution. (Prereq AgEc 1101 or Econ 1101)

Winter Qtr, Sec 1, TTh, 4-5:40, McNH 10, StP Campus

**DHA 3215 APPAREL ANALYSIS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Physical characteristics of components related to function in total garment. Method of analysis includes visual inspection of ready-to-wear garment quality. (Prereq 3214, 3216)

Fall Qtr, Sec 1, TTh, 4-5:40, McNH 216, StP Campus

**DHA 3218 PATTERN DEVELOPMENT II.** 4 credits, tuition\* (includes \$20 course fee): Resident \$364; Non-resident \$1017.60.

Manipulation of basic pattern blocks to form a variety of garment and product structures. Applications of sizing and grading systems to selected designs, computer manipulation of patterns. (Prereq 3211 or TexC 3211. Limited to 18)

Winter Qtr, ★Sec 1, MW, 3:30-6:20, McNH 205, 212, StP Campus

**DHA 3301 (formerly Dsgn 3301) PRODUCTION FOR THE GRAPHIC DESIGNER.** 4 credits, \$3256, tuition\* (includes \$20 course fee): Resident \$364; Non-resident \$1017.60.

Investigation of processes and techniques for production of print communication. Fundamentals of keyline, mechanical art production, specification for printing industry. (Prereq pass portfolio review for degree program. Limited to 18)

Fall Qtr, ★Sec 1, MW, 3:30-6:20, McNH B3, StP Campus

Spring Qtr, ★Sec 2, TTh, 6:30-9:20, McNH B3, StP Campus

**DHA 3323 (formerly Dsgn 3323) DESIGN PROCESS: DRAWING II.** 4 credits, \$3523, tuition\*: Resident \$344; Non-resident \$997.60.

Advanced problem solving in drawing with application of design elements and principles. Assignments done both in and out of studio. (Prereq 1523 or 1323, Pre-DHA or DHA major, or Δ. Limited to 20)

Fall Qtr, ★Sec 1, TTh, 6:30-9:20, McNH 262, StP Campus

Spring Qtr, ★Sec 2, TTh, 3:30-6:20, McNH 258, StP Campus

**DHA 3325 (formerly Dsgn 3325) DESIGN PROCESS: TWO-DIMENSIONAL DESIGN II.** 4 credits, \$3525, tuition\* (includes \$20 course fee): Resident \$364; Non-resident \$1017.60.

Experiments with principles of two-dimensional design. (Prereq 1525 or 1325, Pre-DHA or DHA major, pass Dsgn Comm portfolio review, or Δ. Limited to 18)

Winter Qtr, ★Sec 1, TTh, 3:30-6:20, McNH 305 (PowerMac Lab), StP Campus

Spring Qtr, ★Sec 2, MW, 6:30-9:20, McNH 305 (PowerMac Lab), StP Campus

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**DHA 3327 (formerly Dsgn 3327) DESIGN PROCESS: THREE-DIMENSIONAL DESIGN.** 4 credits, \$3527, tuition\* (includes \$10 course fee): Resident \$354; Non-resident \$1007.60.

Study and application of principles of three-dimensional design. (Prereq 1523, or 1323, 1525 or 1325, 1328 or 1528, Pre-DHA or DHA major, pass Dsgn Comm portfolio review or Δ. Limited to 20)

Fall Qtr, ★○Sec 1, MW, 6:30-9:20, McNH B3, StP Campus (A joint Day/Extension class)

Spring Qtr, ★Sec 2, MW, 6:30-9:20, McNH B3, StP Campus

**DHA 3328 (formerly Dsgn 3328) DESIGN PROCESS: COLOR II.** 4 credits, \$3521, 3528, tuition\* (includes \$20 course fee): Resident \$364; Non-resident \$1017.60.

Continued study of color concepts and their application to design. Students will also be required to purchase supplies for this class which probably will exceed \$125. (Prereq 1523 or 1323, 1528 or 1328, Pre-DHA or DHA major, pass Dsgn Comm portfolio review or Δ. Limited to 20)

Winter Qtr, ★Sec 1, TTh, 6:30-9:20, McNH 262, StP Campus

Spring Qtr, ★Sec 2, TTh, 3:30-6:20, McNH 262, StP Campus

**DHA 3331 (formerly Dsgn 3331) SURFACE-FABRIC DESIGN II.** 4 credits, \$3531, \$5331, tuition\* (includes \$45 course fee): Resident \$389; Non-resident \$1042.60.

Selection from printed, dyed, woven, or non-woven textiles. (Prereq 1531 or 1331, Pre-DHA or DHA major, pass Dsgn Comm portfolio review or Δ. Meets concurrently with 5331. Limited to a combined total of 18)

Winter Qtr, ★Sec 1, TTh, 3:30-6:20 plus arr, McNH B9, StP Campus, Otto

Spring Qtr, ★Sec 2, MW, 6:30-9:20 plus arr, McNH B9, StP Campus

**DHA 3332 (formerly Dsgn 3332) FIBER STRUCTURE: WEAVING.** 4 credits, \$3532, \$5332, tuition\* (includes \$20 course fee): Resident \$364; Non-resident \$1017.60.

Beginning loom techniques. Studio problems. (Prereq 1528 or 1328, 1525 or 1325, or #. Meets concurrently with 5332. Limited to a combined total of 16)

Fall Qtr, ★○Sec 1, TTh, 6:30-9:20, McNH 16, StP Campus (A joint Day/Extension class)

Spring Qtr, ★Sec 2, TTh, 6:30-9:20, McNH 16, StP Campus

**DHA 3334 (formerly Dsgn 3334) COMPUTER APPLICATIONS TO DESIGN PROBLEMS.** 4 credits, \$3534, tuition\* (includes \$20 course fee): Resident \$364; Non-resident \$1017.60.

Solutions to the design process using the Macintosh computer. Students gain experience in microcomputers, peripherals, and software. (Prereq 1323, 1334 or Δ. Limited to 18)

Fall Qtr, ★Sec 1, TTh, 6:30-9:20, McNH 305 (PowerMac Lab), StP Campus

Winter Qtr, ★Sec 2, MW, 6:30-9:20, McNH 305 (PowerMac Lab), StP Campus

Spring Qtr, ★Sec 3, MW, 6:30-9:20, McNH 305 (PowerMac Lab), StP Campus

**DHA 3335 DESIGN PROCESS: MATERIALS.** 4 credits, tuition\* (includes \$20 course fee): Resident \$364; Non-resident \$1017.60.

Design process to convey visual concepts explored through a series of units in selected materials. *Sec 1:* Bookmaking and the Art of Presentation. *Sec 2, 3, 4:* Photographic Process including capturing images, art direction of photography, and introductory darkroom techniques. *Further information is available from the department office.* (Prereq 1323, 1325, 1328 or #, Δ. Limited to 20)

Fall Qtr, ★Sec 1, MW, 6:30-9:20, McNH 258, StP Campus

Fall Qtr, ★Sec 2, TTh, 6:30-9:20, McNH 216, StP Campus

Winter Qtr, ★Sec 3, TTh, 6:30-9:20, McNH 363, StP Campus

Spring Qtr, ★Sec 4, TTh, 6:30-9:20, McNH 216, StP Campus

**DHA 3337 (formerly Dsgn 3337) FIBER STRUCTURE DESIGN I.** 4 credits, \$3537, tuition\*: Resident \$344; Non-resident \$997.60.

Individual designing with two- and three-dimensional forms non-loomed techniques. (Prereq pass Design Communication portfolio review, demonstrated proficiency in sewing. Limited to 20)

Winter Qtr, ★Sec 1, TTh, 6:30-9:20, McNH 216, StP Campus

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**DHA 3350 (formerly Dsgn 3350) TYPOGRAPHIC DESIGN I.** 4 credits, \$3255, tuition\* (includes \$20 course fee): Resident \$364; Non-resident \$1017.60.

Theory and application of principles of typographic composition. Emphasis on history of typography, type faces and letter forms, typesetting methods, terminology, type specification and copy fitting. *Students will be required to purchase supplies for this class which will probably exceed \$125.* (Prereq pass Design Communication portfolio review for degree program. Limited to 20)

Fall Qtr, ★●Sec 1, TTh, 3:30-6:20, McNH B3, StP Campus (A joint Day/Extension class)

Winter Qtr, ★Sec 2, MW, 3:30-6:20, McNH B3, StP Campus

(See also PSch 0700, Typography for Desktop Publishing)

**DHA 3351 is offered only through Day School Enrollment**

**DHA 3352 (formerly Dsgn 3352) GRAPHIC DESIGN II.** 4 credits, \$3252, tuition\* (includes \$20 course fee): Resident \$364; Non-resident \$1017.60.

Continued development of professional skills in areas of layout and design for advertising. Photographic techniques, color separation, and other printing/production techniques are included. (Prereq 3351 or #. A joint Day/ Extension class limited to 20 Extension students)

Winter Qtr, ★●Sec 1, TTh, 3:30-6:20, McNH B3, StP Campus

**DHA 3353 (formerly Dsgn 3353) GRAPHIC DESIGN III.** 4 credits, \$3253, tuition\* (includes \$20 course fee): Resident \$364; Non-resident \$1017.60.

Continued development of layout skills. Exposure to conditions in the workplace. Advertising psychology, consumer relations, and business management. Printing papers. Orientation in agency, studio, and corporate procedures. *Students will be required to purchase supplies for this class which will probably exceed \$125.* (Prereq 3352. Limited to 20)

Fall Qtr, ★Sec 1, MW, 6:30-9:20, McNH 262, StP Campus

Spring Qtr, ★Sec 2, TTh, 3:30-6:20, McNH B3, StP Campus

**DHA 3371 (formerly Dsgn 3371) PROFESSIONAL ISSUES IN APPLIED DESIGN/VISUAL COMMUNICATIONS.** 2 credits, \$3571, tuition\* (includes \$20 course fee): Resident \$192; Non-resident \$518.80.

Discussion of issues in the field, possible goals, and professionalism. **Must be taken S-N.** (Prereq

completion of 60 credits in Major. Limited to 20)  
Winter Qtr, ★Sec 1, M, 3:30-6:20, McNH B3, StP Campus

Spring Qtr, ★Sec 2, T, 6:30-9:20, McNH B3, StP Campus

**DHA 3380 (formerly Dsgn 3380) DESIGN PORTFOLIO.** 2 credits, \$3280, tuition\* (includes \$20 course fee): Resident \$192; Non-resident \$518.80.

Compilation of individual portfolios; individual and group critiques. Preparation of slides. Should be taken as final course in program. **Must be taken S-N.** (Prereq 20 cr of 33xx and/or 35xx courses and pass Design Communications portfolio review. Limited to 20)

Winter Qtr, ★Sec 1, W, 3:30-6:20, McNH B3, StP Campus

Spring Qtr, ★Sec 2, Th, 6:30-9:20, McNH B3, StP Campus

**DHA 3622 (formerly Dsgn 3622) INTERIOR DESIGN PRESENTATION.** 4 credits, \$3550, tuition\* (includes \$20 course fee): Resident \$364; Non-resident \$1017.60.

Exploration of various visual presentation media with an emphasis on techniques that will aid in the communication and visualization of the design process, ideas, and solutions. Detailing of interior structures, furnishings and designs will be developed. **Must be taken A-F.** (Prereq pass Interior Design portfolio review. Limited to 20)

Fall Qtr, ★Sec 1, MW, 6:30-9:20, McNH 480, StP Campus

Spring Qtr, ★Sec 2, TTh, 6:30-9:20, McNH 475, StP Campus

**DHA 3623 (formerly Dsgn 3623) COMPUTER-AIDED DESIGN, DRAFTING SYSTEM I.** 4 credits, \$3552, tuition\* (includes \$20 course fee): Resident \$364; Non-resident \$1017.60.

Application of two-dimensional computer-aided design in the design process as it relates to interior design. AutoCAD software used on an IBM-PC. (Prereq 1621 or 1550 or #. Limited to 19)

Fall Qtr, ★●Sec 1, TTh, 3:30-6:20, McNH 305 (IBM Lab), StP Campus (A joint Day/ Extension class limited to 15 Extension students)

Winter Qtr, ★Sec 2, TTh, 3:30-6:20, McNH 305 (IBM Lab), StP Campus

Spring Qtr, ★Sec 3, TTh, 3:30-6:20, McNH 305 (IBM Lab), StP Campus

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**DHA 3624 (formerly Dsgn 3624) COMPUTER-AIDED DESIGN DRAFTING SYSTEMS II.** 4 credits, \$3556, tuition\* (includes \$20 course fee): Resident \$364; Non-resident \$1017.60.

Application of design principles utilizing advanced 2-D and 3-D computer-aided design and application to the interior design profession using AutoCAD on the IBM-PC. (Prereq 3623 or 3552. Limited to 19) Spring Qtr, ★Sec 1, MW, 6:30-9:20, McNH 305 (IBM Lab), StP Campus

**DHA 3632 (formerly Dsgn 3632) INTERIOR BUILDING TECHNOLOGY.** 4 credits, \$3554, tuition\*: Resident \$344; Non-resident \$997.60.

Methods of building construction and principles of structure theory. Emphasis on interior architectural components and systems. (Prereq pass Interior Design portfolio review; others 1621, DHA 1401 or 1801, or Δ. Limited to 20)

Fall Qtr, ★Sec 1, MW, 6:30-9:20, McNH 475, StP Campus

Winter Qtr, ★Sec 2, MW, 6:30-9:20, McNH 480, StP Campus

**DHA 3643 (formerly Dsgn 3643) INTERIOR DESIGN STUDIO III.** 4 credits, \$3553, tuition\*: Resident \$344; Non-resident \$997.60.

Intermediate interior design problems related to non-residential spaces. (Prereq 3622, Δ)

Winter Qtr, Sec 1, MW, 6:30-9:20, McNH 475, StP Campus

Spring Qtr, Sec 2, MW, 6:30-9:20, McNH 480, StP Campus

**DHA 5170 SPECIAL TOPICS: INTRODUCTION TO MUSEUM WORK.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

A basic overview of museum history, management, and professional practices, as well as current issues in the museum field. Laboratory experience in collections care and exhibition development provided through the Goldstein Gallery, the University's design museum. Field trips, lectures, and guest lectures. (Prereq completion of at least one half of professional sequence, #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 15)

Fall Qtr, ★Sec 1, T, 3:30-6:20, McNH 333, StP Campus

Spring Qtr, ★Sec 2, T, 3:30-6:20, McNH 333, StP Campus

(See also CSch 0198, Behind-the-Scenes at Museums)

**DHA 5170 SPECIAL TOPICS: PUBLICATION DESIGN: Yesterday, Today, and Tomorrow.** 4 credits, tuition (includes \$20 course fee)\*: Resident \$364; Non-resident \$1017.60; Resident Graduate credit \$492; Non-resident Graduate credit \$1058.40; Resident Graduate School credit \$882; Non-resident Graduate School credit \$1916.40.

In-depth investigation of publication design. Combination studio and lecture format provides opportunity to explore facets of publication design including past, present, and emerging developments. *Students will be required to purchase supplies for this class which will probably exceed \$125.* (Prereq jr, sr, or grad status in DHA; 1301 and 3352. Qualified students may register for graduate credit at the University of Minnesota. Limited to 20)

Fall Qtr, ★Sec 3, TTh, 6:30-9:20, McNH B3, StP Campus

**DHA 5170 SPECIAL TOPICS: TYPOGRAPHIC DESIGN II.** 4 credits, tuition (includes \$20 course fee)\*: Resident \$364; Non-resident \$1017.60; Resident Graduate credit \$492; Non-resident Graduate credit \$1058.40; Resident Graduate School credit \$882; Non-resident Graduate School credit \$1916.40.

Continued development of typographic design skills. Advanced work in layout, design, letter forms, and typefaces. *Students will be required to purchase supplies for this class which will probably exceed \$125.* (Prereq 3350. Qualified students may register for graduate credit at the University of Minnesota. Limited to 20)

Winter Qtr, ★Sec 4, MW, 6:30-9:20, McNH B3, StP Campus

**DHA 5170 SPECIAL TOPICS: COMPUTER APPLICATIONS FOR DESIGN III: INTERACTIVE MEDIA.** 4 credits, tuition (includes \$20 course fee)\*: Resident \$364; Non-resident \$1017.60; Resident Graduate credit \$492; Non-resident Graduate credit \$1058.40; Resident Graduate School credit \$882; Non-resident Graduate School credit \$1916.40.

Solutions to the design process involving interactive and multi-media and computer programs. Students use software to create interactive presentations using Macintosh computers. Software to be used involves hypermedia, scripting, video and sound editing, animation and digital output. (Prereq 5334 or Rhet 5581 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 20 Extension students)

Winter Qtr, ★Sec 5, TTh, 6:30-9:20, McNH 305 (PowerMac Lab), StP Campus

Spring Qtr, ★Sec 6, MW, 3:30-6:20, McNH 305 (PowerMac Lab), StP Campus

(See also CSch 0263, Digital Media Overview)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**DHA 5170 SPECIAL TOPICS: GRAPHIC DESIGN PRACTICUM.** 4 credits, tuition (includes \$20 course fee)\*: Resident \$364; Non-resident \$1017.60; Resident Graduate credit \$492; Non-resident Graduate credit \$1058.40; Resident Graduate School credit \$882; Non-resident Graduate School credit \$1916.40.

Advanced work in graphic design on complex topics involving actual projects and team project development. *Students will be required to purchase supplies for this class which will probably exceed \$125.* (Prereq 3352. Qualified students may register for graduate credit at the University of Minnesota. Limited to 20)

Spring Qtr, ★Sec 7, MW, 6:30-9:20, McNH 262, StP Campus

**DHA 5327 THREE-DIMENSIONAL DESIGN II.** 4 credits, tuition\* (includes \$20 course fee): Resident \$364; Non-resident \$1017.60; Resident Graduate credit \$492; Non-resident Graduate credit \$1058.40; Resident Graduate School credit \$882; Non-resident Graduate School credit \$1916.40.

Lectures and studio work based on unitary systems derived from modules. Application of plans based on visual perception exercises to space division in the space laboratory. *Further information is available from the department office, 240 McNeal.* (Prereq 3527, pass portfolio review or #. May not be taken for graduate credit at the University of Minnesota. Limited to 20)

Winter Qtr, ★Sec 1, TTh, 3:30-6:20, McNH 376, StP Campus

**DHA 5331 SURFACE-FABRIC DESIGN III.** 4 credits, \$3531, \$3331, tuition\* (includes \$45 course fee): Resident \$389; Non-resident \$1042.60; Resident Graduate credit \$517; Non-resident Graduate credit \$1083.40; Resident Graduate School credit \$907; Non-resident Graduate School credit \$1941.40.

Designing in one special surface textile technique. Studio problems. Readings. (Prereq 3331. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3331. Limited to a combined total of 16)

Winter Qtr, ★Sec 1, TTh, 3:30-6:20 plus arr, McNH B9, StP Campus

Spring Qtr, ★Sec 2, MW, 6:30-9:20 plus arr, McNH B9, StP Campus

**DHA 5332 FIBER STRUCTURE: WEAVING II.** 4 credits, \$3532, \$5332, tuition\* (includes \$20 course fee): Resident \$364; Non-resident \$1017.60; Resident Graduate credit \$492; Non-resident Graduate credit \$1058.40; Resident Graduate School credit \$882; Non-resident Graduate School credit \$1916.40.

Advanced loom weaving. Exploration of pattern weaves and color. (Prereq 3332 or 3532. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3332. Limited to a combined total of 16)

Fall Qtr, ★Sec 1, TTh, 6:30-9:20, McNH 16, StP Campus (A joint Day/Extension class)

Spring Qtr, ★Sec 2, TTh, 6:30-9:20, McNH 16, StP Campus

**DHA 5334 (formerly Dsgn 5334) COMPUTER APPLICATIONS TO DESIGN PROBLEMS II.** 4 credits, \$5534, tuition\* (includes \$20 course fee): Resident \$364; Non-resident \$1017.60; Resident Graduate credit \$492; Non-resident Graduate credit \$1058.40; Resident Graduate School credit \$882; Non-resident Graduate School credit \$1916.40.

Solutions to the design process using Macintosh computers. Students use software to combine images and print and explore color and desktop publishing. *Students will be required to purchase supplies for this class which will probably exceed \$125.* (Prereq 3334. Qualified students may register for graduate credit at the University of Minnesota. Limited to 18)

Fall Qtr, ★Sec 1, MW, 3:30-6:20, McNH 305 (PowerMac Lab), StP Campus (A joint Day/Extension class limited to 15 Extension students)

Winter Qtr, ★Sec 2, MW, 3:30-6:20, McNH 305 (PowerMac Lab), StP Campus

Spring Qtr, ★Sec 3, MW, 6:30-9:20, McNH 305 (PowerMac Lab), StP Campus

**DHA 5337 (formerly Dsgn 5337) FIBER STRUCTURE DESIGN: QUILTING.** 4 credits, \$5537, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Application of color and design principles through techniques of patchwork and quilting. (Prereq pass Design Communication portfolio review. Qualified students may register for graduate credit at the University of Minnesota. Limited to 16)

Fall Qtr, ★Sec 1, MW, 6:30-9:20, McNH 212, StP Campus

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**DHA 5461 (formerly Hsg 5461) HOUSING MANAGEMENT.** 5 credits, tuition\*: Resident \$430; Non-resident \$1247; Resident Graduate credit \$590; Non-resident Graduate credit \$1298; Resident Graduate School credit \$1077.50; Non-resident Graduate School credit \$2370.50.

Management of multi-unit housing. Includes historical perspectives, current status of housing, management approaches, psychosocial impact of housing and community design, specific residential populations. Students will conduct a post-occupancy evaluation of a housing complex. (Prereq 1101 and 3463 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr, ⓪Sec 1, TTh, 2:30-4:45, McNH 180, StP Campus, Franklin

**DHA 5465 (formerly Hsg 5465) HOUSING IN WORLD PERSPECTIVE I.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Social analysis of housing around the world; emphasis on population, environment, and social organization of nations as contexts for national policy and for housing choices of households. (Prereq 3463 or 3863 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, ⓪Sec 1, MW, 3:30-5:10, McNH 216, StP Campus, Morris

**DHA 5481 (formerly Hsg 5481) DESIGNED ENVIRONMENTS FOR AGING.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Design of environments with potential to compensate for deficits in physical and mental functioning; emphasis on older adults and barrier-free, adaptable, and responsible physical environments. (Prereq 1642 or 3463 or #. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr, Sec 1, TTh, 4:30-6:20, McNH 216, StP Campus

**DHA 5634 INTERIOR DESIGN CODES AND ENVIRONMENTAL ISSUES.** 3 credits. Offered alternate years. Tentatively scheduled for 1996-97.

## Dutch (Dtch)

(205 Folwell Hall: 625-2080)

### College of Liberal Arts

(German, Scandinavian, and Dutch)

Textbooks for most Dtch courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

James Parente, Jr., Professor

**Read about language laboratories on page 485.**

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Dutch. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**Dtch 3310 STUDIES IN DUTCH AUTHORS: THE GOLDEN AGE, 1580-1700.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

A survey of Dutch literature between 1580 and 1700 in the context of contemporary political, social, economic, and religious developments in the Low Countries. Topics include the relationship between 17th-century Dutch writers and artists (Rubens, Rembrandt); the role of literature in the creation of a Dutch political and religious identity; the rise of Amsterdam as a European cultural center; women in early modern Dutch art and letters; and the beginning of Dutch colonialism. *May be repeated for credit.* (Prereq 1103 or 15 cr of 1110 or #. Meets concurrently with 5490. A joint Day/Extension class)

Fall Qtr, ⓪Sec 1, W, 4:40-6:35, FolH 426, Parente

**Dtch 3510 TOPICS IN DUTCH CULTURE.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Single topic of Dutch culture explored in depth. **Requires no knowledge of Dutch.** *May be repeated for credit.* (No prereq. A joint Day/Extension class)

Spring Qtr, ⓪Sec 1, T, 4:40-6:35, FolH 114

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Dtch 5490 TOPICS IN DUTCH LITERATURE: THE GOLDEN AGE, 1580-1700.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

See course description for Dtch 3310. *May be repeated for credit.* (Prereq reading knowledge of Dutch. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3310. A joint Day/Extension class) Fall Qtr, **Sec 1, W, 4:40-6:35, FolH 426, Parente**

### Early Childhood Studies Program

(Department of Extension Classes, 200 Wesbrook Hall: 625-1855)

An interdisciplinary program within Extension Classes which offers continuing education courses and competency-based training for child care professionals and paraprofessionals, family-based service providers, and foster care providers. Other courses related to Early Childhood can be found in this Bulletin listed under Child Psychology, Educational Psychology, and Family Social Science. For information regarding the Early Childhood field, contact CEE Counseling at 625-2500 or the College of Education and Human Development Student Affairs Office at 625-6501. For Prekindergarten/Nursery School licensure, contact Lynn Galle at 624-7009. For the undergraduate Early Childhood degree, contact Harlan Hansen at 625-4039.

### East Asian Studies

See Area Studies Programs; and the Institute of Languages and Literatures

### Ecology, Evolution, and Behavior (EEB)

(100 Ecology: 625-4466)

#### College of Biological Sciences

Textbooks for most EEB courses are available at University of Minnesota Bookstore—St. Paul (624-9200).

Richard E. Phillips, Professor  
Philip J. Regal, Professor

(See also Biology; BGS 3003, Business and the Natural Environment; Interdepartmental Study courses; *Natural and Physical Sciences* in Compleat Scholar noncredit section; and GC 1112, Science in Context: Human Uses of the Environment)

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Ecology, Evolution, and Behavior. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**EEB 3001 INTRODUCTION TO ECOLOGY.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60. (IS)

Basic concepts in ecology; the organization, development, and functioning of ecosystems; population growth and regulation. Human impact on ecosystems. Not open to biology majors. (No prereq. Open to juniors and above, or completion of 90 credits) Fall Qtr, Sec 1, MW, 6:20-8:15, Ecology 150c, StP Campus

(See also CSch 0500, Biodiversity: What Is It and Why Is It Important?)

**EEB 3006 VISIONS OF NATURE: THE NATURAL WORLD AND POLITICAL THOUGHT.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60.

*Bioscience students may not apply these credits toward the major.* Ancient times to the present of theories about the organization of nature, and their significance for the development of ethics, religion, political and economic philosophy, civics, and environmentalism in Western civilization and elsewhere. (No prereq. A joint Day/Extension class) Spring Qtr, **Sec 1, TTh, 6:30-8:10, Ecology 150c, StP Campus, Regal**

**EEB 3111 INTRODUCTION TO ANIMAL BEHAVIOR.** 4 credits, \$3811, \$AnSc 3111, tuition\*: Resident \$374; Non-resident \$1084.60.

Survey of the biological study of animal behavior including questions of causation, development, function, and evolution; emphasizes the evolution of adaptive behavior, especially social behavior, in the natural environment. (Prereq Biol 1009 or 1201 or 1202 or #. A joint Day/Extension class)

Winter Qtr, **Sec 1, Lect TTh, 6-8, BorH 365; Rec TTh, 8:10-9, BorH 365, StP Campus, Phillips**

(See also CSch 0521, Where Are They Now? Native Animals of the Metropolitan Region)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



## Economics (Econ)

(1035 Management/Economics: 625-6353)

### College of Liberal Arts

Textbooks for most Econ courses are available at University of Minnesota Bookstore—West Bank (625-3000).

(See also Public Affairs)

Harlan M. Smith, Professor Emeritus of Economics

**You need not be majoring in Economics to register for any economics classes, but you need to have completed prerequisite courses.**

**B.A. and B.S. Majors**—The Department of Economics offers four major sequences, two for the B.A. degree and two for the B.S. The B.S. degree is more quantitative in orientation than the B.A. The specialized tracks (B.A. Quantitative Emphasis major program and B.S. Mathematics Emphasis major program) stress particular supporting quantitative skills (calculus, linear algebra, and econometrics), while the two general tracks (B.A. and B.S. major programs) do not require such specific quantitative courses. The senior advisor for majors and premajors is the Director of Undergraduate Programs.

*Students interested in a degree in economics are urged to request the College of Liberal Arts bulletin which explains the B.A. and B.S. in detail; telephone (612) 625-2008.*

### B.A. Major Sequence

The B.A. major program is intended to give the student a solid background in economics without assuming that he or she will pursue a career or graduate training in economics. The B.A. major program is the least quantitative of the four major options and offers considerable freedom in course selection from among many upper division electives.

### Required Preparatory Courses—

- 1101 or 1101H or 1104 or equiv;
- 1102 or 1102H or 1105 or equiv;
- Math 1142 or 1251 or equiv;
- Stat 1001 or equiv recommended

### Major Requirements—

#### Part I:

- Stat 3011-3012 (no credit for Stat 5021)
- 3101 or 3101H, 3102 or 3102H, 3103 or 3103H (3101 must be taken first; 3102 and 3103 may be taken simultaneously)
- 28 3xxx-5xxx cr; may include three courses from Acct 3101; AgEc 3040, 3070, 3500, 3610, any

3- or 4-cr AgEc 5xxx-level course; BFin 3000, 3300. Economics courses reserved for nonmajors do not count toward the 28 cr.

#### Part II:

Composition requirement: upper-level writing course, Comp 3014—Writing for the Quantitative Social Sciences or 3027—Advanced Expository Writing (highly recommended)

Senior project paper (obtain guidelines from the department)

Two courses in the major requirements section may be taken S-N.

GPA requirement: C or better in all courses in the major requirements section.

4 cr of directed studies courses (3970, 5970) may be applied toward the major.

Supporting coursework in computer science, mathematics, and statistics is recommended.

### B.A. Quantitative Emphasis Major Sequence

The B.A. Quantitative Emphasis major program adds basic quantitative training (in calculus, linear algebra, and econometrics) to the student's economics program. This major should be especially attractive to students considering careers that require some practical economic analysis or who are considering graduate work in business administration or public affairs.

### Required Preparatory Courses—

- 1101 or 1101H or 1104 or equiv;
- 1102 or 1102H or 1105 or equiv;
- Math 1251-1252 or equiv

### Major Requirements—

#### Part I:

- Math 1261 or equiv
- Stat 3011-3012 (no credit for Stat 5021)
- 3101 or 3101H, 3102 or 3102H, 3103 or 3103H (3101 must be taken first; 3102 and 3103 may be taken simultaneously); 3231
- 20 3xxx-5xxx cr; may include two courses from Acct 3101; AgEc 3040, 3070, 3500, 3610, any 3- or 4-cr AgEc 5xxx-level course; BFin 3000, 3300. Economics courses reserved for nonmajors do not count toward the 20 cr.

#### Part II:

Same as Part II for B.A. major program.

Supporting coursework in computer science and statistics is recommended.

### B.S. Major Sequence

The B.S. major program emphasizes a strong quantitative component but is not designed specifically for students who plan to pursue a career or graduate

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

training in economics. The major would be suitable for those interested in graduate work in business administration. The student is given significant freedom in course selection from three quantitative fields (computer science, mathematics, and statistics) as well as from economics.

### Required Preparatory Courses—

- (a) 1101 or 1101H or 1104 or equiv;  
1102 or 1102H or 1105 or equiv;  
Math 1251-1252-1261 or equiv
- (b) A minimum GPA of 2.50 in economics and mathematics courses is required

### Major Requirements—

#### Part I:

Stat 5121-5122 or 5131-5132-5133 (5131-5132-5133 are more difficult) (no credit for Stat 5021 or Stat 3011-3012)

2 additional courses (at least 4 cr each) from CSci department (at or above the 31xx level), Math department (any course at or above the 31xx level except Math 3142 and Math 5090), or Stat department (any course at the 5xxx level except Stat 5021). Courses must be approved by the economics department.

3101 or 3101H, 3102 or 3102H, 3103 or 3103H (3101 must be taken first; 3102 and 3103 may be taken simultaneously)

Two courses from: 5xxx-level honors courses; 5113; 5231-5232; 5733; and 5161-5162-5163, 5164-5165-5166, 5261-5262-5263. Courses in these last three sequences may be taken S-N.

#### Part II:

24 3xxx-5xxx cr; may include three courses selected from Acct 3101; AgEc 3040, 3070, 3500, 3610, any 3- or 4-cr AgEc 5xxx-level course; BFin 3000, 3300. Math 5081, 5242-5243, 5606-5607-5608. Economics courses reserved for nonmajors do not count toward the 24 cr

Composition requirement: Upper-level writing course, Comp 3014—Writing for the Quantitative Social Sciences or 3027—Advanced Expository Writing (highly recommended)

Two courses in the major requirements section may be taken S-N (in addition to 5161-5162-5163, 5164-5-6, or 5261-2-3)

GPA requirement: C or better in all courses in the major requirements section.

4 cr of directed studies courses (3970, 5970) may be applied toward the major.

### B.S. Mathematics Emphasis Major Sequence

The B.S. Mathematics Emphasis major program is designed specifically for the student interested in graduate study of economics or a career as a professional economist in business, government, or college teaching. The major's strong quantitative component stresses particular quantitative skills such as multivariate calculus, linear algebra, and econometrics—essential in economics graduate training.

### Required Preparatory Courses—

- (a) 1101 or 1101H or equiv;  
1102 or 1102H or 1105 or equiv;  
Math 1251-1252-1261 or equiv;  
(Stat 3011 or equiv recommended)
- (b) A minimum GPA of 2.50 in economics and mathematics courses is required

### Major Requirements—

#### Part I:

Math 3251-3261 or equiv

Stat 5121-5122 or 5131-5132-5133

Econ 5231 (Econometrics)

3101 or 3101H, 3102 or 3102H, 3103 or 3103H (3101 must be taken first; 3102 and 3103 may be taken simultaneously);

Two courses from: 5xxx-level honors courses; 5113; 5232; 5733; and 5161-5162-5163, 5164-5165-5166, 5261-5262-5263. Courses in these last three sequences may be taken S-N

#### Part II:

Same as Part II for B.S. major program

Supporting coursework in computer science is recommended.

### Minor Sequence

For any of the following minor programs, no more than one course may be taken S-N; a grade of C or better is required in all courses in the minor requirements section.

### General Economics Minor

#### Required Preparatory Courses—

1101 or 1101H or 1104;

1102 or 1102H or 1105;

Math 1142 or 1251 or equiv

#### Minor Requirements—

3101 or 3105 or equiv

16 additional 3xxx-5xxx cr (advance approval of courses by the economics department is needed)

Up to 4 cr of directed studies courses (3970, 5970) may be applied toward the minor

\* Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**Economic Theory Minor**

Required Preparatory Courses—  
 1101 or 1101H or 1104 or equiv;  
 1102 or 1102H or 1105 or equiv;  
 Math 1251-1252 or equiv

Minor Requirements—  
 Math 1261-3251-3261, or equiv  
 3101, 3102, 3103 or equiv  
 2 courses from 5107H, 5113, 5733

**Econometrics Minor**

Required Preparatory Courses—  
 1101 or 1101H or 1104 or equiv;  
 1102 or 1102H or 1105 or equiv;  
 Math 1251-1252 or equiv

Minor Requirements—  
 Math 1261 or equiv  
 Stat 5121-5122 or 5131-5132-5133  
 3101, 3102 or equiv  
 5231-5232

4 cr directed studies (5970) for an econometrics research project

**International Trade and Development Minor**

Required Preparatory Courses—  
 1101 or 1101H or 1104;  
 1102 or 1102H or 1105;  
 Math 1142 or 1251 or equiv

Minor Requirements—  
 3101 or equiv  
 5331 (prereq 3102) or 5301  
 5337 (prereq 3102) or 5307  
 5315 or 3315  
 5431-5432 (prereq 3102, 3103) or 5401

**Applied Microeconomics Minor**

Required Preparatory Courses—  
 1101 or 1101H or 1104;  
 1102 or 1102H or 1105;  
 Math 1251 or equiv

Minor Requirements—  
 3101 or equiv  
 5531 (prereq 3102) or 3501  
 5631 (prereq 3103) or 3601  
 5611 or 5621 or 5623  
 5821 (prereq 3103) or 3801 or 5831 (prereq 3103)  
 Recommended: 3231 (prereq Stat 3011-3012 or equiv)

**Monetary Economics Minor**

Required Preparatory Courses—  
 1101 or 1101H or 1104;  
 1102 or 1102H or 1105;  
 Math 1142 or 1251 or equiv

Minor Requirements—  
 Stat 3011 or equiv  
 3101 or 3105, 3102 or equiv  
 3751-3752  
 5721 or 3701  
 5731 or 5741

Students interested in a major or minor in Economics should contact CEE Counseling, 625-2500. All economics courses required for either, plus enough electives, are offered in Extension over a two- or three-year period.

**Joint Day/Extension Classes**—You may register through Extension for day school sections of Econ 1101 and 1102 and for those day school economics courses which are not offered during the year in the Extension Classes Bulletin. *Economics courses offered during the year in the Extension Classes Bulletin (except for 1101 and 1102) are not available through Joint Day/Extension registration.* For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**Special Term Classes:** All credits are *quarter* credits even though *Extension economics classes meet on a 16-week special term schedule (including final examination)*. (Economics classes were previously offered on a *Semester* basis.) The interdisciplinary section of 1102 is offered on the quarter basis.

**Winter and Spring Breaks:** *Fall Spec Term* classes do not meet during the winter break (Dec. 11-Jan. 1); classes resume Tues., Jan. 2. *Winter Spec Term* classes do not meet during the spring break (Mar. 18-23); classes resume Mon., Mar. 25.

**Late fees:** There is no late fee for registering in any Winter Spec Term Econ class through Friday, February 2. (Fall Spec Term classes follow the Fall Qtr late fee schedule.)

**Caucus Night:** Classes will not meet on the Tuesday evening declared as Caucus Night by Minnesota law.

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Econ 1101 (formerly 1002)-1102 (formerly 1001) PRINCIPLES OF ECONOMICS.** 4 credits each semester, if no credit received for any equivalent course, tuition\* each semester: Resident \$318; Non-resident \$922.20. (IS)

Principles underlying economic activity and the way these principles work out through our economic institutions. 1101 is preferably first, but if the student wishes, the two may be taken the same term to permit more rapid progress to other economics courses. 1101: Micro-economics: demand and supply, competition and monopoly, distribution of income. 1102: Macro-economics: national income, money and banking, economic growth. (Prereq ability to handle simple graphs and elementary algebra at the level of GC 0623 and GC 0631. Each section limited to 35 unless otherwise indicated)

### Campus

Fall Spec Term, 1101, ★Sec 2, M, 6:10-7:50,  
Sept. 25-Jan. 29, VinH 314

Fall Spec Term, 1101, ★Sec 3, T, 6:10-7:50,  
Sept. 26-Jan. 30, AmundH 156

Fall Spec Term, 1101, ★Sec 4, T, 8:05-9:45,  
Sept. 26-Jan. 30, AmundH 158

Fall Spec Term, 1101, ★Sec 5, W, 6:10-7:50,  
Sept. 27-Jan. 31, VinH 314

Fall Spec Term, 1101, ★Sec 7, Th, 6:10-7:50,  
Sept. 21-Feb. 1 (no class Nov. 23), VinH 207

Fall Spec Term, 1102, ★Sec 1, M, 6:10-7:50,  
Sept. 25-Jan. 29, AmundH 158

Fall Spec Term, 1102, ★Sec 2, T, 6:10-7:50,  
Sept. 26-Jan. 30, VinH 213

Fall Spec Term, 1102, ★Sec 3, W, 6:10-7:50,  
Sept. 27-Jan. 31, AmundH 158

Winter Spec Term, 1101, ★Sec 8, M, 6:10-7:50,  
Feb. 12-June 3, VinH 314

Winter Spec Term, 1101, ★Sec 9, T, 6:10-7:50,  
Feb. 13-June 4, VinH 313

Winter Spec Term, 1101, ★Sec 10, Th,  
6:10-7:50, Feb. 15-June 6, VinH 313

Winter Spec Term, 1102, ★Sec 5, M, 6:10-7:50,  
Feb. 12-June 3, AmundH 156

Winter Spec Term, 1102, ★Sec 6, W, 6:10-7:50,  
Feb. 14-June 5, AmundH 156

Winter Spec Term, 1102, ★Sec 7, Th, 6:10-7:50,  
Feb. 15-June 6, AmundH 156

### Roseville Area High School

Fall Spec Term, 1101, ★Sec 1, M, 6-7:40, Sept.  
25-Jan. 29, room 243 (Limit 30)

### Richfield Senior High School

Fall Spec Term, 1101, ★Sec 6, W, 6:20-8, Sept.  
27-Jan. 31, room 144

### Interdisciplinary Offering: Econ 1102/Pol 1001

The following two courses will be offered concurrently with course material team taught, interwoven, and integrated where appropriate. **Students must register for both courses, using separate registration forms for each course.** This is a total of 9 credits.

**Econ 1102 PRINCIPLES OF ECONOMICS: MACRO-ECONOMICS.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Principles underlying economic activity and the way these principles work out through our economic institutions. Macro-economics: national income, money and banking, economic growth. (Prereq 1101 or equivalent, ability to handle simple graphics and elementary algebra at the level of GC 0623 and GC 0631, ¶Pol 1001, sec 2. Meets concurrently with Pol 1001, sec 2. Limited to a combined total of 28)

Winter Qtr, ★Sec 4, TTh, 6:20-9:20, HHCtr 60,  
Freeman, Green

**Pol 1001 AMERICAN GOVERNMENT AND POLITICS.** 5 credits, tuition\*: Resident \$397.50; Non-resident \$1152.75.

Principles, organization, processes, functions of government, and the interplay of political forces in the United States. Attention given throughout to current issues. (Prereq §Econ 1102, sec 2. Meets concurrently with Econ 1102, sec 4. Limited to a combined total of 28)

Winter Qtr, ★Sec 2, TTh, 6:20-9:20, HHCtr 60,  
Freeman, Green

(About the instructors: John R. Freeman is Professor of Political Science, and George D. Green is Associate Professor of History)

### Economics majors and nonmajors

Students should note that Extension Classes offers in each field of economics both a course designed for the student who is not an economics major and courses designed for economics majors. 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 by fields for economics majors and for others. In addition to those listed, the following course is **open to economics majors and nonmajors** alike (only prerequisite is Principles of Economics, Econ 1101-1102 or equivalent):

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**Econ 5021 Economics, Ethics and Economic Philosophy**

|  | Courses open to                                      |  |
|--|--|--|
|  | Econ Majors<br>(Prerequisites usually<br>3101, 3102) | Non-Majors<br>(Prerequisites Principles<br>of Economics 1101, 1102)<br>or equivalent |
| Survey of Economic Ideas                         | 5022   | 3021   |
| American Economic Problems                       | 5031   | 3031   |
| Current Economic Issues                          | 5033   | 3033   |
| The Prospective World<br>Economy                 | 5041   | 3041   |
| Economic Development                             | 5331   | 5301   |
| Comparative Economic<br>Systems                  | 5337   | 5307   |
| International Economics                          | 5429   | 5401   |
| Labor Economics                                  | 5531   | 3501   |
| Industrial Organization<br>and Anti-Trust Policy | 5631   | 3601   |
| Money and Banking                                | 5721   | 3701-5701  |
| Elements of Public Finance                       | 5821   | 3801   |

**General economics**

**Econ 3021 and 5022 SURVEY OF ECONOMIC IDEAS.** 3-5 credits, tuition\* each credit: Resident \$86; Non-resident \$249.40; Resident Graduate credit \$118; Non-resident Graduate credit \$259.60; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

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, starting before Adam Smith and coming up to the present day. (Prereq 1101, 1102 or equivalent or # for 3031, and 3101 and 3102 for 5022. Qualified students may register for graduate credit for 5022 at the University of Minnesota. Student may register for 3, 4 or 5 credits; assignments and examinations will vary accordingly. Term paper required only for 5 credits)

Fall Spec Term, Sec 1, Th, 6:10-7:50, Sept. 21-Feb. 1 (no class Nov. 23), BlegH 120, Smith

**Econ 3031 and 5031 AMERICAN ECONOMIC PROBLEMS.** 4 credits. **Not offered 1995-96.**

This course is designed to fill gaps by offering material not covered in other Extension economics courses at the 3000 or 5000 level. It shows how

simple economic principles and other relevant considerations bear upon some of our American economic problems. (Prereq 1101, 1102 or equivalent for 3031 [not open to economics majors], 3101 or 3105 or # for 5031. 5031 may not be taken for graduate credit. The courses meet concurrently but only one may be taken for credit)

**Econ 3033 and 5033 CURRENT ECONOMIC ISSUES.** 4 credits. **Not offered 1995-96.**

Current controversies over economic policies to deal with some of our economic problems. Different issues are chosen for study each time the course is offered, so it may be taken more than once with instructor consent. Opportunity is provided for students to focus part of their effort on a specific issue of their choice in the general area of study. (Prereq 1101, 1102 or equivalent for 3033. 3101 or 3105 or # for 5033. Qualified students may register in 5033 for graduate credit at the University of Minnesota. The courses meet concurrently, but only one may be taken for credit)

**Econ 3041 and 5041 THE PROSPECTIVE WORLD ECONOMY.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Consideration of what the economic future holds and what can be done now to deal with negative factors and to improve the prospects. (Prereq 1101, 1102 or equivalent for 3041 [not open to economics majors]; 3101 or 3105 or # for 5041. Qualified students may register in 5041 for graduate credit at the University of Minnesota. The courses meet concurrently but only one may be taken for credit) Winter Spec Term, Sec 1, Th, 6:10-7:50, Feb. 15-June 6, BlegH 120, Smith

**Econ 5021 ECONOMICS, ETHICS, AND ECONOMIC PHILOSOPHY.** 3-5 credits. **Not offered 1995-96.**

Different topic each time offered, so course may be taken more than once, with consent of instructor. (Prereq 1101, 1102 or equivalent or #. Students may register for 3, 4, or 5 credits; assignments and examinations vary accordingly. Term paper required only for 5 credits. Qualified students may register for graduate credit at the University of Minnesota)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

### Economic theory

**Econ 3101 MICROECONOMIC THEORY.** 4 credits, §3105 or BGS 3001, tuition\*: Resident \$344; Non-resident \$997.60.

Behavior of households, firms and industries under competitive and monopolistic conditions. Factors influencing production, price and other decisions of the firm; application of the theory. Business degree students admitted prior to the Fall of 1981 or after Winter 1986 may take this course or Econ 3105.

**Must be taken A-F.** (Prereq 1101, 1102 or equivalent, 1 qtr calculus, or #. Limited to 35)

Fall Spec Term, ★Sec 1, Th, 6:10-7:50, Sept. 21-Feb. 1 (*no class Nov. 23*), VinH 213

Winter Spec Term, ★Sec 2, M, 6:10-7:50, Feb. 12-June 3, FordH 349

**Econ 3102 MACROECONOMIC THEORY.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60. (IS)

Factors determining the price level, the amount of employment, and national income; effects of monetary and fiscal policies. Emphasis on a general equilibrium approach. (Prereq 3101, or equivalent, Math 1111 or 1131 or 1201 or equivalent or #. Limited to 35)

Fall Spec Term, ★Sec 1, T, 6:10-7:50, Sept. 26-Jan. 30, BlegH 215

Winter Spec Term, ★Sec 2, T, 6:10-7:50, Feb. 13-June 4, BlegH 215

**Econ 3103 WELFARE ECONOMICS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Economics majors are required to take this course to graduate. For others, it is an elective. Relationship between economic efficiency, markets, and society's goals for the distribution of well being. Criteria for choosing among alternative distributions of well being. Applications of the theory to public goods and other situations. (Prereq 3101 or #)

Winter Spec Term, Sec 1, W, 6:10-7:50, Feb. 14-June 5, BlegH 130

**Econ 3105 MANAGERIAL ECONOMICS.** 4 credits, §3101, §BGS 3001, tuition\*: Resident \$344; Non-resident \$997.60.

Theory of the firm; managerial decision problems. Demand theory. Production technology and cost concepts. Pricing and output decisions. Investment behavior. Not open to economics majors. Business degree students admitted prior to the Fall of 1981 or after Winter 1986 may take this course or Econ 3101. **Must be taken A-F.** (Prereq 1101, 1102 or equivalent, 1 qtr calculus. Limited to 35)

Fall Spec Term, ★Sec 1, W, 6:10-7:50, Sept. 27-Jan. 31, HHHctr 60

### Development and area studies

**Econ 5301 and 5331 ECONOMIC DEVELOPMENT.** 4 credits. **Not offered 1995-96.**

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 1101, 1102 or equivalent for 5301 [not open to economics majors]; 3101, 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 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

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 1101, 1102 or equivalent for 5307 [not open to economics majors]; 3101, 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)

Fall Spec Term, Sec 1, Th, 8:05-9:45, Sept. 21-Feb. 1 (*no class Nov. 23*), BlegH 120, Smith

### International economics

**Econ 5401 and 5429 (formerly 5431) INTERNATIONAL ECONOMICS.** 4 credits, §5431, 5432. **Not offered 1995-96.**

Principal issues involved in international economic relations. A one-term survey of international trade theory, arguments over tariff policy, foreign investment, exchange rates, the balance of payments, and analysis of international monetary systems. (Prereq 1101, 1102 or equivalent for 5401 [not open to economics majors]; 3101, 3102 or # for 5429. The courses meet concurrently, but only one may be taken for credit. Qualified students may register for graduate credit at the University of Minnesota)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Labor economics

**Econ 3501 and 5531 LABOR ECONOMICS.** 4 credits. **Not offered 1995-96.**

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 1101, 1102 or equivalent or # for 3501 [not open to economics majors]; 3101, 3102 for 5531. The courses meet concurrently, but only one can be taken for credit. Qualified students may register for graduate credit for 5531 at the University of Minnesota.)

(See also IR 3007, Collective Bargaining and Labor Relations)

## Industrial organization

**Econ 3601 and 5631 INDUSTRIAL ORGANIZATION AND ANTI-TRUST POLICY.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

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 1101, 1102 or equivalent or # for 3601 [not open to economics majors]; 3101, 3102 or # for 5631. The courses meet concurrently, but only one can be taken for credit. Qualified students may register for graduate credit for 5631 at the University of Minnesota)

Fall Spec Term, Sec 1, M, 6:10-7:50, Sept. 25-Jan. 29, BlegH 120

## Money and banking

**Econ 5721 MONEY AND BANKING.** 4 credits, §3701, 5701, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40. **(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 Monetary Policy. (Prereq 3101, 3102 or #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with Econ 3701 and 5701)

Winter Spec Term, Sec 1, Th, 8:05-9:45, Feb. 15-June 6, BlegH 135, Smith

**Econ 3701 and 5701 MONEY, BANKING, AND MONETARY POLICY.** 4 credits, §5721, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40. **(IS 3701)**

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 1101, 1102 or equivalent. Not open to Econ majors, who should take 5721. The courses meet concurrently and with Econ 5721, but only one may be taken for credit. Qualified students may register for graduate credit for 5701 at the University of Minnesota)

Winter Spec Term, Sec 1, Th, 8:05-9:45, Feb. 15-June 6, BlegH 135, Smith

## Public finance

**Econ 3801 and 5821 ELEMENTS OF PUBLIC ECONOMICS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Competing views on the proper role of government in the economy. Effects of tax and spending policies, taking into account private agents' response to government actions and the way government officials may use their powers; optimal policies. Applications primarily to U.S. federal government. (Prereq 1101, 1102 or equivalent or # for 3801 [not open to economics majors]; 3101, 3102 or # for 5821. The courses meet concurrently but only one may be taken for credit. Qualified students may register for graduate credit for 5821 at the University of Minnesota)

Winter Spec Term, Sec 1, M, 6:10-7:50, Feb. 12-June 3, BlegH 245

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

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## Course Descriptions

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### Education and Human Development, College of

Persons interested in admission to an Education program should contact College of Education and Human Development Student and Professional Services, 110 Wulling Hall, 86 Pleasant Street S.E., Minneapolis, Minnesota 55455 (625-6501), for further information. Most teacher preparation courses must be taken in day school, when schools are in session for observation. However, all programs in the College of Education and Human Development emphasize the preparation of educators in liberal education and in the teaching subjects. Many evening offerings listed in this bulletin may be taken by prospective educators for later use toward degree programs or to fulfill some prerequisite course work in the College of Education and Human Development.

**Educators-in-Service:** Many courses in academic fields are available for teachers and educators 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 and Human Development. Day school class schedules and information about mail registration are available at College of Education and Human Development Student and Professional Services, 110 Wulling Hall, 86 Pleasant Street S.E., University of Minnesota, Minneapolis, Minnesota 55455 (625-6501).

#### Day School Classes

**How to register in College of Education and Human Development Day School Classes:** Students who wish to register in late afternoon and Saturday morning education day school classes (see individual departments for a listing) should follow these steps:

**Adult Special Students:** (1) Begin admission and registration process at College of Education and Human Development Student and Professional Services, 110 Wulling Hall. (2) Secure admission approval from a Student Progress Subcouncil representative in Student and Professional Services. (3) For registration, request mail registration materials and your fee statement will be sent to you, or secure fee statement at the Registration Center, 202 Fraser Hall, and pay fees.

**Master of Education (M.Ed.) Degree Students:** Begin registration process at Student and Professional Services, 110 Wulling Hall; mail registration

is available upon request.

**Master of Arts (M.A.), Doctor of Education (Ed.D.), and Doctor of Philosophy (Ph.D.) Degree Students:** (1) If registered in Graduate School during previous quarters, obtain registration materials in your departmental office; new students obtain registration materials in 307 Johnston Hall. (2) Secure adviser's approval. (3) Return completed forms to 310 Johnston Hall. (4) Secure fee statement at the Registration Center, 202 Fraser Hall, and pay fees. If not admitted previously to Graduate School, contact the Graduate School (625-3014) for information about admission procedures.

*For further information, contact Education and Human Development Student and Professional Services, 625-6501.*

**Renewal of Teaching licensure:** Former teachers and those wishing to renew licenses should check with the State Department of Education (296-2046) concerning specific requirements for individual majors. (See also EPsy 5135, Workshop in Human Relations)

Please see the following listings for all College of Education and Human Development course offerings:

**AdEd,** Adult Education (Department of Vocational and Technical Education)

**AgEd,** Agricultural Education; see Vocational and Technical Education (Department of Vocational and Technical Education)

**BIE,** Business and Industrial Education (Vocational and Technical Education)

**CPsy,** Child Psychology (Institute of Child Development)

**CI,** Curriculum and Instruction (Curriculum and Instruction; includes ArEd, Elem, CISy, SeEd)

**EdAd,** Educational Administration (Department of Educational Policy and Administration)

**EdPA,** Educational Policy and Administration (Department of Educational Policy and Administration)

**EPsy,** Educational Psychology (Department of Educational Psychology— includes courses in the program areas of counseling and student personnel psychology, psychological foundations, school psychology, and special education)

**FE,** Family Education; see Vocational and Technical Education (Department of Vocational and Technical Education)

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★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



**HRD**, Human Resource Development (Vocational and Technical Education)

**Kin**, Kinesiology (School of Physical Education and Recreation)

**MthE**, Mathematics Education (Department of Curriculum and Instruction)

**MuEd**, Music Education (School of Music)

**PE**, Physical Education (School of Physical Education and Recreation)

**Rec**, Recreation, Park, and Leisure Studies (School of Physical Education and Recreation)

**SPFE**, Social and Philosophical Foundations of Education (Department of Educational Policy and Administration; see EdPA for complete listing)

**VoEd**, Vocational Education; see Vocational and Technical Education (Department of Vocational and Technical Education)

(See also FR 5403, Fundamentals of Natural Resource Education; Geo 5051, Physical Geology for Teachers; Geo 5052, Historical Geology for Teachers; Soil 5022, Basic Soil Science for Teachers)

**For information about Early Childhood Studies, see page 152.**

## Educational Policy and Administration (EdPA)

(330 Wullng Hall: 624-1006)

**College of Education and Human Development**  
(Department of Educational Policy and Administration)

Textbooks for most EdPA courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

G.F. Alkire, Associate Professor  
M.S. Anderson, Assistant Professor  
A.L. Bagley, Professor  
R.H. Bruininks, Professor  
J.J. Cogan, Professor  
W.P. Donohue, Lecturer  
A.M. Harkins, Associate Professor  
D. Hendel, Professor  
V.L. Hendrix, Professor  
C. P. Hooker, Professor Emeritus  
J.A. King, Associate Professor  
F. Lawrenz, Professor  
D.R. Lewis, Professor  
M.L. Lundy-Dobbert, Professor  
T.L. Mazzoni, Professor

J.A. Mestenhauer, Professor  
V.D. Mueller, Professor  
N.C. Nickerson, Professor  
R.E. Orton, Associate Professor  
R.M. Paige, Associate Professor  
T. Schultz, Lecturer  
C.H. Sederberg, Professor  
C.S. Turner, Associate Professor  
R.F. Weatherman, Professor

**Master's Degree**—A Master of Education degree with a focus on Leadership is available through the Curriculum and Instruction department and through the Educational Policy and Administration department. This degree is designed to increase a teacher's ability to take on the expanded roles and responsibilities of educators in Minnesota and across the country. Students will be admitted into the program once a year, each fall quarter. Classes will be held at an off-campus site. Degree completion is possible within two to three years. One requirement for admission is that applicants must have at least two years of classroom teaching experience.

For further information on degree programs, telephone (612) 626-7196.

**EdPA 3101 HISTORICAL FOUNDATIONS OF MODERN EDUCATION.** 4 credits, §EdPA 5101, §Hum 3101, Hum 5101, tuition\*: Resident \$374; Non-resident \$1084.60.

Background course for all other courses in the history and philosophy of education. Analysis and interpretation of important elements in modern education derived from the Greeks, the Romans, the Middle Ages, and the Renaissance. (No prereq. Meets concurrently with EdPA 5101, Hum 3101, 5101. A joint Day/Extension class limited to a combined total of 15 Extension students)

Fall Qtr, ★●Sec 1, M, 4:30-7, WullH 140, Bagley

**EdPA 3120 HISTORY OF CHILDHOOD EDUCATION.** 4 credits, §EdPA 5120, tuition\*: Resident \$374; Non-resident \$1084.60.

Childhood education in Western civilization; emphasis on images, symbols, ideas important to educational theory and practice in home and school. **Must be taken A-F.** (No prereq. Meets concurrently with 5120. A joint Day/Extension class limited to a combined total of 15 Extension students)

Winter Qtr, ★●Sec 1, Th, 4:30-6:30, WullH 220, Bagley

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**EdPA 3155 HISTORY OF WESTERN EDUCATIONAL THOUGHT.** 4 credits, §EdPA 5155, §Hum 3155, Hum 5155, tuition\*: Resident \$374; Non-resident \$1084.60.

Major educational classics of Western civilization: Plato, Aristotle, Cicero, Quintillian, Montaigne, Milton, Locke, Rousseau, and others. (No prereq. Meets concurrently with EdPA 5155, Hum 3155, 5155. A joint Day/Extension class limited to a combined total of 15 Extension students)

Winter Qtr, ★●Sec 1, T, 4:30-7, WullH 140, Bagley

**EdPA 5090 SCHOOL AND SOCIETY.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Readings in social science and philosophy relevant to thinking about role of school in a changing American society. **Must be taken A-F.** (Prereq senior or post-B.A. in Education or CLA music ed major or teaching major or Δ. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 2 Extension students)

Fall Qtr, ★●Sec 1, MW, 8:15-9:30 a.m.

Fall Qtr, ★●Sec 2, Th, 12:20-2:50, Harkins

Winter Qtr, ★●Sec 3, T, 4:30-7

Winter Qtr, ★●Sec 4, Arr

Spring Qtr, ★●Sec 5, MW, 1:30-2:45, Bagley

Spring Qtr, ★●Sec 6, TTh, 12:45-2, Lewis

**EdPA 5101 HISTORICAL FOUNDATIONS OF MODERN EDUCATION.** 4 credits, §EdPA 5101, §Hum 3101, Hum 5101, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

See course description for EdPA 3101. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with EdPA 5101, Hum 3101, 5101. A joint Day/Extension class limited to a combined total of 15 Extension students)

Fall Qtr, ★●Sec 1, M, 4:30-7, WullH 140, Bagley

**EdPA 5103 SUPERVISION AND ADMINISTRATION OF SPECIAL EDUCATION.** 3 credits, §EPsy 5660, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Procedures in establishing and improving educational programs for exceptional children. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with EPsy 5660. A joint Day/Extension class limited to a combined total of 15 Extension students)

Fall Qtr, ★●Sec 1, M, 4:30-7, JonesH 10  
Spring Qtr, ★●Sec 2, W, 4:30-7, NichH 209

**EdPA 5120 HISTORY OF CHILDHOOD EDUCATION.** 3 credits, §3120, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

See course description for EdPA 3120. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3120. A joint Day/Extension class limited to a combined total of 15 Extension students)

Winter Qtr, ★●Sec 1, Th, 4:30-6:30, WullH 220, Bagley

**EdPA 5128 WORKSHOP: EDUCATIONAL ADMINISTRATION.** 1-6 credits. Tuition\* each credit: Resident \$93.50; Non-resident \$271.15; Resident Graduate credit \$118; Non-resident Graduate credit \$259.60; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Laboratory approach provides opportunities for experienced administrators to concentrate on common administrative and supervisory problems. *Focus Sec 1: Evaluation Theory (with EPsy 5200) (3-6 cr).* *Focus Sec 2: Quality and Renewal in the Learning Organization (3 cr).* *Focus Sec 3, 5, 6: Evaluation Colloquium (with EPsy 5246) (1 cr).* *Focus Sec 4: International and Intercultural Education laboratory (with EdPA 5609) (2 cr).* (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Fall Qtr, ★●Sec 1, T, 4:30-7:30, King

Fall Qtr, ★●Sec 2, W, 4:30-7, Harkins

Fall Spec Term, ★●Sec 3, Th, 4:30-6:30, Sept.

21, Oct. 5, 19, Nov. 2, 16, 30, King

Winter Qtr, ★●Sec 4, Th, 4:30-6:30, Mestenhauer

Winter Qtr, ★●Sec 5, Th, 4:30-6:30, Jan. 4, 18, Feb. 1, 29, Mar. 7 plus arr, King

Spring Qtr, ★●Sec 6, Th, 4:30-6:30, Mar. 28,

Apr. 11, 25, May 9 plus arr, King

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**EdPA 5131 COMPARATIVE EDUCATION.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

European, Asian, and American systems and philosophies of education; possibilities of international education. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Fall Qtr, ★○Sec 1, W, 4:30-8, PeikH 335, Cogan

**EdPA 5141 CRITICAL ISSUES IN CONTEMPORARY EDUCATION.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Introduces graduate students to ideas involved in current theory and practice. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Winter Qtr, ★○Sec 1, T, 4:30-7:30, PeikH 155, King

**EdPA 5155 HISTORY OF WESTERN EDUCATIONAL THOUGHT.** 4 credits, \$3155, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

See course description for EdPA 3155. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3155, Hum 3155, 5155. A joint Day/Extension class limited to a combined total of 15 Extension students)

Winter Qtr, ★○Sec 1, T, 4:30-7, WullH 140, Bagley

**EdPA 5156 HISTORY OF IDEAS IN AMERICAN EDUCATION.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Readings in American political, economic, and social development related to education; reference to the emerging system of public education. Recommended as a background for EdPA 5170 but not a prerequisite. (No prereq. Qualified students may

register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Spring Qtr, ★○Sec 1, T, 4:30-7, ChDev 216, Bagley

**EdPA 5167 THE AMERICAN MIDDLE SCHOOL.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Sources of the movement; purposes, functions, and limitations; fundamental problems, types, and curricular implications of reorganization. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Winter Qtr, ★○Sec 1, Sa, 8-10:30 a.m., PeikH 165, Nickerson

**EdPA 5173 CASE STUDIES FOR POLICY RESEARCH.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Introduction to the use of qualitative case study research method and its application to questions of educational practice. Class project required. Emphasis on design of studies that employ open-ended interviewing as primary data collection technique. **Must be taken A-F.** (Prereq education or graduate student or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 2 Extension students)

Winter Qtr, ★○Sec 1, Th, 4-6:30, PeikH 155, Turner

**EdPA 5182 COMPARATIVE PHILOSOPHIES OF EDUCATION.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Examination of competing philosophies of education. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Spring Qtr, ★○Sec 1, M, 4:30-7, WullH 220, Orton

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**EdPA 5201 FORMAL ORGANIZATIONS IN EDUCATION.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Introduction to classical and current theories of organizational behavior and administration in education. Leadership and control, communication, conflict, the effects of educational environments, organizational design and change, and organizational effectiveness. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Fall Qtr, ★●Sec 1, M, 4:30-7, NichH 109, Schultz

Spring Qtr, ★●Sec 2, Th, 4-6:30, PeikH 225, Turner

**EdPA 5202 POLITICS OF EDUCATION.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Social science findings, concepts, and methods used to consider the political context of educational administration; emphasis on public school policy making by local and state governments; role of administrators. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Fall Qtr, ★●Sec 1, Th, 4:30-7, NichH 109, Mazzoni

Winter Qtr, ★●Sec 2, M, 4:30-7, WullH 140, Mazzoni

**EdPA 5204 FINANCING ELEMENTARY AND SECONDARY SCHOOLS.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Value assumptions and educational finance policy, economic factors, sources and characteristics of educational revenue, state and local distribution systems, federal support, urban/rural variations, institutional financing alternatives. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Winter Qtr, ★●Sec 1, W, 4:30-7, WullH 140, Sederberg

Spring Qtr, ★●Sec 2, W, 4:30-7, PeikH 315, Sederberg

**EdPA 5209 EDUCATION IN FUTURE SOCIAL SYSTEMS.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Interdisciplinary inquiry into problems of social specialization and generalization; projections and analysis of long-range (30 years or more) social and technological trends related to education. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Fall Qtr, ★●Sec 1, T, 4:30-7, PeikH 315, Harkins

**EdPA 5210 SOCIAL FORECASTING AND EDUCATIONAL FUTURES.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Application of social sciences in the academic and applied dimensions to formal education, including a social-scientific and systems orientation toward communities; emphasis on short-range social and educational planning—near-present to a few years hence. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Winter Qtr, ★●Sec 1, T, 4:30-7, JonesH 2, Harkins

**EdPA 5211 SOCIAL DESIGN AND EDUCATIONAL FUTURES.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Medium-range interdisciplinary approach to community design and analysis emphasizing formal education systems in community context; focus upon new neighborhoods, towns, experimental cities and subcultural enclaves in rural and urban settings emphasizing time period from several years to 3 decades hence. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Spring Qtr, ★●Sec 1, T, 4:30-7, PeikH 225, Harkins

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**EdPA 5212 SCHOOL BUDGETING.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Concepts and skills involved in preparing financial budgets for public schools; competency in translating educational programs into budgetary systems, anticipating revenue receipts, planning expenditures, and techniques for preparing a balanced budget. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Fall Qtr, ★●Sec 1, W, 4:30-7, WullH 140, Sederberg  
Spring Qtr, ★●Sec 2, T, 4:30-7, JonesH 10, Sederberg

**EdPA 5213 FINANCIAL RESOURCE MANAGEMENT.** 3 credit, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Concepts and skills involved in the management of financial resources in public schools; performance exercises related to public school accounting systems, purchasing, the controller function, and reporting and interpreting school financial data. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Winter Qtr, ★●Sec 1, Th, 4:30-7, NichH 201, Sederberg

**EdPA 5214 SCHOOL MANAGEMENT INFORMATION SYSTEMS.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Basic techniques required to generate, maintain, and make accessible computer-based management information system in education. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Spring Qtr, ★●Sec 1, T, 4:30-7, PeikH 155, Hendrix

**EdPA 5215 THE PRINCIPALSHIP.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

The role of the principal: qualifications, duties, and problems. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Fall Qtr, ★●Sec 1, T, 4:30-7, WullH 220, Alkire  
Spring Qtr, ★●Sec 2, T, 4:30-7, WullH 220

**EdPA 5216 RECENT RESEARCH IN ELEMENTARY SCHOOL ADMINISTRATION.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Pertinent research literature. (Prereq 5215. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Winter Qtr, ★●Sec 1, T, 4:30-7, JonesH 10, Alkire

**EdPA 5222 INTRODUCTION TO POLICY RESEARCH.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Critical examination of the political, philosophical, environmental, and methodological issues that accompany policy research in education; particular consideration will be given to the determinants of the applicability of quantitative and qualitative methods. **May be taken S-N by graduate students only;** all others must take A-F. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Winter Qtr, ★●Sec 1, Sa, 9-11 a.m., PeikH 225, Bruininks

Spring Qtr, ★●Sec 2, Th, 4:30-7, PeikH 155, Mazzoni

**EdPA 5224 LEGAL IMPLICATIONS OF ACTS BY SCHOOL BOARDS, ADMINISTRATORS, AND TEACHERS.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Constitutional, statutory, and common law bases of school administration; principles growing out of fundamental legal procedures. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Winter Qtr, ★●Sec 1, M, 4:30-7, Law 20, Hooker  
Spring Qtr, ★●Sec 2, M, 4:30-7, Law 20, Hooker

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**EdPA 5226 EDUCATIONAL FACILITIES PLANNING.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Planning educational facilities for public and private school systems and institutions of higher education. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Fall Qtr, ★○Sec 1, W, 4:30-7, JonesH 4, Alkire

**EdPA 5227 PUBLIC SCHOOL PERSONNEL PROGRAMS.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Selection, assignment, evaluation, and development of school personnel, salary and conditions of service; policies of administrative, instructional, and noninstructional personnel. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Spring Qtr, ★○Sec 1, W, 4:30-7, NichH 122, Alkire

**EdPA 5240 SEMINAR: CLINICAL EXPERIENCES IN EDUCATIONAL ADMINISTRATION.** 1-9 cr, tuition\* each credit: Resident \$93.50; Non-resident \$271.15; Resident Graduate credit \$118; Non-resident Graduate credit \$259.60; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

For educational administration majors engaged in clinical experiences. **Must be taken S-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension Students)

Fall Qtr, ★○Sec 1, Th, 4:30-7, NichH 209, Sederberg, Schultz

Winter Qtr, ★○Sec 2, Th, 4:30-7, NichH 207, Schultz

Spring Qtr, ★○Sec 3, Th, 4:30-7, PeikH 225, Schultz

**EdPA 5245 ETHICS, MORALITY, AND VALUES IN EDUCATION.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Introductory graduate-level course on the subject matter of ethics, morality, and values in education.

Application to key issues of professional practice. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension Students)

Winter Qtr, ★○Sec 1, W, 4:30-7, PeikH 225, Orton

**EdPA 5250 AMERICAN HIGHER EDUCATION.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

American higher and postsecondary education in historical and contemporary perspective; special emphasis on societal and political demands on higher education system; consequent changes in its various forms and functions. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Fall Qtr, ★○Sec 1, W, 4:30-7:50, WullH 220, Anderson

**EdPA 5260 INTRODUCTION TO EDUCATIONAL PLANNING.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Principles, tools, and emerging issues in higher and elementary/secondary education settings, including decision-making models, strategic planning, forecasting, program planning, and short-range planning. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Winter Qtr, ★○Sec 1, W, 4:30-7, NichH 201  
Spring Qtr, ★○Sec 2, T, 4:30-7, NichH 207

**EdPA 5265 ADMINISTERING THE HIGH SCHOOL PROGRAM.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Emphasis upon the principal as instructional leader; practices and procedures used in building a master schedule; analysis and evaluation of the school program and services. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Spring Qtr, ★○Sec 1, Th, 7:30-10, PeikH 155, Nickerson

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**EdPA 5272 PROBLEMS: EDUCATIONAL POLICY AND ADMINISTRATION.** 1-3 credits each quarter, §8272, tuition\*each credit: Resident \$93.50; Non-resident \$271.15; Resident Graduate credit \$118; Non-resident Graduate credit \$259.60; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

For students in educational policy and administration who are qualified to make intensive studies of a school system. *Focus Sec 1, 3, 5:* Directed study arranged with an individual EdPA faculty member. *Focus 2, 4, 6:* Seminar: Ed.D. International Education (2 cr). (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Fall Qtr, ★●Sec 1, Arr

Fall Qtr, ★●Sec 2, Arr, Weatherman

Winter Qtr, ★●Sec 3, Arr

Winter Qtr, ★●Sec 4, Arr, Weatherman

Spring Qtr, ★●Sec 5, Arr

Spring Qtr, ★●Sec 6, Arr, Weatherman

**EdPA 5274 TWO-YEAR POSTSECONDARY INSTITUTIONS.** 3 credits, §VoEd 5274, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Present status, development, functions, organization, curriculum, and trends in postsecondary but nonbaccalaureate institutions. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Fall Qtr, ★●Sec 1, T, 4-6:30, JonesH 2, Turner

**EdPA 5280 INTRODUCTION TO THE ECONOMICS OF EDUCATION.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Economic impact of education on educational markets, prices, and production relationships, distribution of income, and investment and cost-benefit analysis in education. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Winter Qtr, ★●Sec 1, W, 4:30-7:50, PeikH 155, Lewis

**EdPA 5281 COST AND ECONOMIC ANALYSIS IN EDUCATIONAL EVALUATION.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Use and application of cost-effectiveness, cost-benefit, cost-utility, and cost-feasibility in the evaluation of educational problems and programs. **Must be taken S-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Winter Qtr, ★●Sec 1, T, 5-7:30, NichH 201, Lewis

**EdPA 5285 PRINCIPLES AND METHODS OF EVALUATION.** 3 credits, §EPsy 5240, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Introductory course in program evaluation; theory, practical examples; purposes, role, program descriptions, and evaluation strategies. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with EPsy 5240. A joint Day/Extension class limited to a combined total of 15 Extension students)

Fall Qtr, ★●Sec 1, T, 4:30-7:30, NichH 213, Lawrenz

Winter Qtr, ★●Sec 2, W, 4:30-7:30, WullH 220

**EdPA 5292 THE LAW AND POST-SECONDARY EDUCATIONAL INSTITUTIONS.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Analysis of court opinions and Federal regulations affecting postsecondary educational institutions. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Spring Qtr, ★●Sec 1, T, 4-6:30, JonesH 2, Donohue

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**EdPA 5540 SEMINAR: THE COLLEGE STUDENT.** 3 credits, \$EPsy 5451, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Psychology and sociology of college students, research concerning diversity of populations, vocational development of students; student society, culture, mental health, underachievement, drop-outs, values, and attitudes; relevant research methods. (Prereq 6 cr in psychology or educational psychology. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with EPsy 5451. A joint Day/Extension class limited to a combined total of 15 Extension students)

Spring Qtr, ★●Sec 1, Th, 4:30-7:15, BuH 123, Hendel

**EdPA 5603 INTERNATIONAL EDUCATION AND DEVELOPMENT.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Contemporary theories relating formal and nonformal education to national development in social, cultural, political, and economic sectors; alternative conceptualizations and theoretical perspectives on education and development. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Fall Qtr, ★●Sec 1, T, 4:30-8, NichH 201, Paige

**EdPA 5605 RESEARCH TOPICS: INTERNATIONAL DEVELOPMENT EDUCATION.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Empirical research conducted in developing societies relating formal and nonformal education to national development in social, cultural, political, and economic sectors. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Winter Qtr, ★●Sec 1, T, 4:30-8, PeikH 335, Cogan

**EdPA 5607 APPLIED INTERNATIONAL DEVELOPMENT EDUCATION.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Educational innovations designed to promote national development in selected developing nations; educational case studies in the context of such objectives; conceptualizations of the role of education in development and outcomes. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Spring Qtr, ★●Sec 1, T, 4:30-8, NichH 122, Paige

**EdPA 5609 CRITICAL ISSUES IN INTERNATIONAL EDUCATION AND EDUCATIONAL EXCHANGES.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Comprehensive, multi-dimensional, and policy practices of U.S. and other universities. Curricular strategies. The field's conceptual development; its multidisciplinary; integration of learning; production, consumption, and transfer of international knowledge; and, especially, practical application to programs, global careers, and pedagogy. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Winter Qtr, ★●Sec 1, TTh, 2-4, ChDev 105, Mestenhauer

**Day School Classes**—In addition to the Extension classes listed above, day school classes are sometimes offered to educators during late afternoon, early evening, and weekend hours. For registration information about day school College of Education and Human Development courses, see **page 160** or call 625-6501.

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



**Educational Psychology (EPsy)**

(204 Burton Hall: 624-3543)

**College of Education and Human Development**

Textbooks for most EPsy courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

(See also Psychology)

Brian Abery, Lecturer  
 William Bart, Professor  
 Sandra Christenson, Associate Professor  
 Ernest C. Davenport, Associate Professor  
 Stanley Deno, Professor  
 V. Lois Erickson, Associate Professor  
 Christine Espin, Associate Professor  
 Lynn Friedman, Assistant Professor  
 Joan Garfield, Adjunct Associate Professor  
 L. Sunny Hansen, Professor  
 Vernon Hendrix, Professor  
 Diane Holte, Associate Education Specialist  
 Susan Hupp, Professor  
 David W. Johnson, Professor  
 Jean King, Adjunct Associate Professor  
 Marie Knowlton, Associate Professor  
 Frances Lawrenz, Adjunct Professor  
 Judith LeCount, Lecturer  
 Douglas B. Marston, Lecturer  
 Scott McConnell, Professor  
 Mary McEvoy, Professor  
 John Romano, Associate Professor  
 Susan Rose, Associate Professor  
 John Rynders, Professor  
 S. Jay Samuels, Professor  
 Mary Schultz, Teaching Specialist  
 Robert Tennyson, Professor  
 Kay A. Thomas, Adjunct Assistant Professor  
 James Turnure, Professor  
 Paulus van den Broek, Professor  
 Catherine Wambach, Adjunct Associate Professor  
 Frank B. Wilderson, Jr., Professor  
 Jennifer York, Assistant Professor

**American Sign Language: 626-9392**

(See also PSch 0744, An Overview of Sign Language and Deaf Culture)

**Note:** American Sign Language courses can be used to complete a second language requirement. Contact CEE Counseling (625-2500) with questions.

*You must attend the entire first class session or your space in that class will be forfeited.*

**EPsy 1601 AMERICAN SIGN LANGUAGE I. 5 credits, tuition\*: Resident \$397.50; Non-resident \$1152.75.**

Introduces fundamentals of American Sign Language as a second language. Emphasis is placed on varieties of sign language and sign language practices, questions, commands, and simple sentences. Receptive and Expressive sign vocabulary building are featured. **May be taken S-N.** (No prereq. Limited to 25)

Fall Qtr, ★Sec 1, M, 4:40-9, EltH N647  
 Fall Qtr, ★Sec 2, MW, 12:20-2:25  
 Fall Qtr, ★Sec 3, MW, 3:35-5:40  
 Fall Qtr, ★Sec 4, MW, 3:35-5:40  
 Fall Qtr, ★Sec 5, MWF, 9:05-10:30 a.m.  
 Fall Qtr, ★Sec 6, MWF, 11:15 a.m.-12:40, EltH N647  
 Fall Qtr, ★Sec 7, Th, 4:40-9, JonesH 2  
 Winter Qtr, ★Sec 8, M, 4:40-9, EltH N647  
 Winter Qtr, ★Sec 9, MW, 3:35-5:40  
 Winter Qtr, ★Sec 10, MW, 12:20-2:25  
 Winter Qtr, ★Sec 11, MW, 1:25-3:30  
 Winter Qtr, ★Sec 12, MWF, 11:15 a.m.-12:40  
 Winter Qtr, ★Sec 13, T, 4:40-9, JonesH 4  
 Spring Qtr, ★Sec 14, M, 4:40-9, JonesH 4  
 Spring Qtr, ★Sec 15, MW, 3:35-5:40  
 Spring Qtr, ★Sec 16, MWF, 11:15 a.m.-12:40  
 Spring Qtr, ★Sec 17, MWF, 9:05-10:30 a.m.  
 Spring Qtr, ★Sec 18, TTh, 12:20-2:25

**EPsy 1602 AMERICAN SIGN LANGUAGE II. 5 credits, tuition\*: Resident \$397.50; Non-resident \$1152.75.**

Introduces fundamentals of American Sign Language as a second language beyond the basic level. Emphasis is placed on locatives, classifiers, and temporal and distributional aspects. Receptive and Expressive sign vocabulary building are featured at the conversational level. **May be taken S-N.** (Prereq 1601 or #. Limited to 25)

Fall Qtr, ★Sec 1, MWF, 9:05-10:30 a.m.  
 Fall Qtr, ★Sec 2, MWF, 11:15 a.m.-12:40  
 Fall Qtr, ★Sec 3, T, 4:40-9, PeikH 215  
 Fall Qtr, ★Sec 4, TTh, 7:55-10 a.m.  
 Fall Qtr, ★Sec 5, TTh, 12:20-2:25  
 Winter Qtr, ★Sec 6, MWF, 9:05-10:30 a.m.  
 Winter Qtr, ★Sec 7, MWF, 11:15 a.m.-12:40  
 Winter Qtr, ★Sec 8, T, 4:40-9, JonesH 11  
 Winter Qtr, ★Sec 9, TTh, 7:55-10 a.m.  
 Winter Qtr, ★Sec 10, TTh, 12:20-2:25  
 Winter Qtr, ★Sec 11, TTh, 12:20-2:25  
 Winter Qtr, ★Sec 12, Th, 4:40-9, JonesH 2  
 Spring Qtr, ★Sec 13, MW, 12:20-2:25  
 Spring Qtr, ★Sec 14, MW, 3:35-5:40, AkerH 317  
 Spring Qtr, ★Sec 15, T, 4:40-9, JonesH 4  
 Spring Qtr, ★Sec 16, TTh, 12:20-2:25  
 Spring Qtr, ★Sec 17, Th, 4:40-9, EltH N647

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**EPsy 1603 AMERICAN SIGN LANGUAGE III.** 5 credits, tuition\*: Resident \$397.50; Non-resident \$1152.75.

Expands on the conversational use of American Sign Language as a second language including grammar, deaf culture, short stories, and narratives. Receptive and Expressive use of ASL will be stressed at the conversational level. **May be taken S-N.** (Prereq 1602 or #. Limited to 25)

Fall Qtr, ★Sec 1, MWF, 11:15 a.m.-12:40

Fall Qtr, ★Sec 2, TTh, 12:20-2:25

Fall Qtr, ★Sec 3, Th, 4:40-9, JonesH 11

Winter Qtr, ★Sec 4, MW, 1:25-3:30

Winter Qtr, ★Sec 5, MWF, 11:15 a.m.-12:40

Winter Qtr, ★Sec 6, MWF, 3:35-5:40

Winter Qtr, ★Sec 7, T, 4:40-9, EltH N647

Spring Qtr, ★Sec 8, MW, 12:20-2:25

Spring Qtr, ★Sec 9, MW, 12:20-2:25

Spring Qtr, ★Sec 10, MW, 3:35-5:40

Spring Qtr, ★Sec 11, MWF, 9:05-10:30 a.m.

Spring Qtr, ★Sec 12, MWF, 11:15 a.m.-12:40

Spring Qtr, ★Sec 13, W, 4:40-9, JonesH 11

Spring Qtr, ★Sec 14, TTh, 12:20-2:25

**EPsy 3260 BASIC AND APPLIED STATISTICS.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60.

Visual and quantitative methods for presenting and analyzing data; common descriptive indices for univariate and bivariate studies; introduction to inferential techniques. *Meets CLE Mathematical Thinking requirement.* (No prereq. Limited to 40)

Winter Qtr, ★Sec 1, M, 5:30-8:50, Peikh 225

**EPsy 3601 AMERICAN SIGN LANGUAGE IV.** 5 credits, tuition\*: Resident \$467.50; Non-resident \$1355.75.

Stresses conversational use of American Sign Language and culturally significant topics relating to the deaf community, complex use of ASL, grammatical features and vocabulary expansion. Comprehension and expression of jokes, dialogues, stories are emphasized. **May be taken S-N.** (Prereq 1603. Limited to 25)

Fall Qtr, ★Sec 1, MWF, 9:05-10:30 a.m.

Fall Qtr, ★Sec 2, MWF, 11:15 a.m.-12:40

Fall Qtr, ★Sec 3, T, 4:40-9, JonesH 11

Fall Qtr, ★Sec 4, TTh, 12:20-2:25

Winter Qtr, ★Sec 5, MWF, 11:15 a.m.-12:40

Winter Qtr, ★Sec 6, TTh, 12:20-2:25

Winter Qtr, ★Sec 7, TTh, 12:20-2:25

Winter Qtr, ★Sec 8, Th, 4:40-9, JonesH 11

Spring Qtr, ★Sec 9, MWF, 9:05-10:30 a.m.

Spring Qtr, ★Sec 10, MWF, 11:15 a.m.-12:40

Spring Qtr, ★Sec 11, T, 4:40-9, JonesH 11

Spring Qtr, ★Sec 12, TTh, 12:20-2:25

Spring Qtr, ★Sec 13, Th, 4:40-9, JonesH 11

**EPsy 3602 AMERICAN SIGN LANGUAGE V.** 5 credits, tuition\*: Resident \$467.50; Non-resident \$1355.75.

Stresses common conversational use of American Sign Language and culturally significant topics relating to the deaf community. Idiomatic use of sign in conversation and expansion of vocabulary are introduced. Comprehension and expression of common conversational topics and idiomatic expressions are emphasized. **May be taken S-N.** (Prereq 3601. Limited to 25)

Fall Qtr, ★Sec 1, M, 4:40-9, JonesH 2

Fall Qtr, ★Sec 2, MW, 3:35-5:40

Fall Qtr, ★Sec 3, MWF, 11:15 a.m.-12:40

Fall Qtr, ★Sec 4, TTh, 12:20-2:25

Winter Qtr, ★Sec 5, MW, 3:35-5:40

Winter Qtr, ★Sec 6, MWF, 11:15 a.m.-12:40

Winter Qtr, ★Sec 7, TTh, 12:20-2:25

Winter Qtr, ★Sec 8, Th, 4:40-9, JonesH 10

Spring Qtr, ★Sec 9, MW, 1:25-3:30

Spring Qtr, ★Sec 10, TTh, 12:20-2:25

Spring Qtr, ★Sec 11, T, 4:40-9

**EPsy 3603 CULTURAL PERSPECTIVES OF DEAFNESS.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45.

Provides an introduction to the deaf community, its social norms, values, and folklore. The international integration of social, religious, athletic, literary, and scholarly institutions are introduced. **May be taken S-N.** (Prereq 1603)

Fall Qtr, Sec 1, W, 4:40-7:20, NichH 216

Winter Qtr Sec 2, W, 4:40-7:20, NichH 109

Spring Qtr, Sec 3, W, 4:40-7:20, NichH 216

**EPsy 5110 INTELLIGENCE.** 3 credits, \$PsyF 5147, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Theories of intelligence and its development; implications for educational practices and psychological research. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension students)

Fall Qtr, ★Sec 1, Th, 4:30-7, BuH 125, Bart

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**EPsy 5112 KNOWING, LEARNING, AND THINKING.** 4 credits, §PsyF 5152, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40. (IS) Principles of human information processing; issues in memory and thought; discussion of mental operations in comprehension and understanding; analysis of intellectual structures supporting problem solving in applied settings. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension students)  
 Spring Qtr, ★○Sec 1, W, 5:30-8:50, EltH N647, Samuels

**EPsy 5113 INTRODUCTION TO THE PSYCHOLOGY OF INSTRUCTION.** 3 credits, §PsyF 5153, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Survey of psychological factors in design of instruction; performance criteria, strategy, and sequence in contexts of research; development and implementation activities in instructional techniques, technologies, and delivery systems, psychological processes relevant to measures of effectiveness in teaching-learning environment. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr, ○Sec 1, T, 4:15-6:45, NichH 109, Tennyson

**EPsy 5114 PSYCHOLOGY OF STUDENT LEARNING.** 3 credits, §PsyF 5182, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30. (IS) Survey of psychological methods and principles; models of the learner; topics in development, creativity, intelligence, and motivation, implications for teaching and curriculum design in preschool, elementary, and secondary education; professional training with children and adolescents as clients. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Fall Qtr, ★○Sec 1, W, 4:30-7, PeikH 315, van den Broek

Winter Qtr, ★○Sec 2, W, 4:30-7, NichH 122, van den Broek

Spring Qtr, ★○Sec 3, W, 4:30-7, BuH 120, van den Broek

**EPsy 5115 PSYCHOLOGY OF ADULT LEARNING.** 4 credits, §PsyF 5183, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Survey of psychological methods and principles in human learning; models of the adult learner; topics in motivation, creativity, achievement, intelligence; implications of teaching and curriculum design in higher education, continuing education, and professional training. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Fall Qtr, ★○Sec 1, T, 4:15-7:35, PeikH 155, Tennyson

Spring Qtr, ★○Sec 2, T, 4:15-7:35, EltH N647, Tennyson

**EPsy 5116 BEHAVIOR ANALYSIS IN EDUCATION.** 4 credits, §PsyF 5149, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Practical applications of reinforcement theory; behavior analysis, precision teaching, programmed instruction. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 20 Extension students)

Fall Qtr, ★○Sec 1, M, 4:40-8:30, PtH 204, McEvoy

Winter Qtr, ★○Sec 2, M, 4:40-8:30, PtH 204, Deno

Spring Qtr, ★○Sec 3, M, 4:40-8:30, PtH 204, Deno

**EPsy 5117 PROBLEM SOLVING AND DECISIONMAKING.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Literature from decision research contrasted with literature in problem solving from cognitive psychology and psychology of information processing; improvement in decision making through consideration of training, allocation of work, and decision aids. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Spring Qtr, ★○Sec 1, M, 4:15-7:35, ChDev 216, Bart

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**EPsy 5130 PERSONALITY AND SOCIAL DEVELOPMENT.** 3 credits, §PsyF 5162, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Major concepts and research findings in adjustment and development with special emphasis on educational implications. **Must be taken A-F.** (Prereq 5 cr in introductory psychology. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 20 Extension students)

Spring Qtr, ★●Sec 1, W, 4:30-7, WullH 140

**EPsy 5135 WORKSHOP IN HUMAN RELATIONS.** 6 credits, §PsyF 5305, tuition\*: Resident \$561; Non-resident \$1626.90; Resident Graduate credit \$708; Non-resident Graduate credit \$1557.60; Resident Graduate School credit \$1293; Non-resident Graduate School credit \$2844.60.

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. **Must be taken S-N.** (No prereq. Approved to meet State Department of Education requirement for licensure renewal. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, ●Sec 1, M, 5-10, BuH 120, LeCount

Winter Qtr, ●Sec 2, M, 5-10, BuH 125, LeCount

Spring Qtr, ●Sec 3, M, 5-10, BuH 120, LeCount

**EPsy 5150 SOCIAL PSYCHOLOGY OF EDUCATION.** 3 credits, §PsyF 5170, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Concepts and theories in the field applied to educational problems and settings; laboratory sessions to make applications and develop skills in group behavior. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Fall Qtr, ★●Sec 1, M, 4-6:30, PeikH 225,

Johnson

**EPsy 5221 BASIC PRINCIPLES OF MEASUREMENT.** 3 credits, §PsyF 5121, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Fundamental concepts, principles, and methods in educational and psychological measurement; educationally useful properties of tests; types and uses of derived scores; factors influencing reliability and validity. **May be taken S-N.** (Prereq EPsy 5260 or EPsy 8260 or PsyF 5110 or PsyF 8110. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension students)

Spring Qtr, ★●Sec 1, TTh, 4:15-5:30, WullH 140, Davenport

**EPsy 5240 PRINCIPLES AND METHODS OF EVALUATION.** 3 credits, §PsyF 5125, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Introductory course in program evaluation; theory; practical examples, purpose, roles, program descriptions, and evaluation strategies. **May be taken S-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meet concurrently with EdPA 5285 sec 2 and 4. A joint Day/Extension class limited to a combined total of 15 Extension students)

Fall Qtr, ★●Sec 1, T, 4:30-7:30, NichH 213,

Lawrenz

Winter Qtr, ★●Sec 2, W, 4:30-7:30, WullH 220

**EPsy 5246 EVALUATION COLLOQUIUM.** 1 credit, tuition\*: Resident \$93.50; Non-resident \$271.15; Resident Graduate credit \$118; Non-resident Graduate credit \$259.60; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Informal seminar of faculty and students interested in the problems of evaluation. **Must be taken S-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension students)

Fall Spec Term, ★●Sec 1, Th, 4:30-6:30, Sept.

21, Oct. 5, 19, Nov. 2, 16, 30, ChDev 218, King

Winter Spec Term, ★●Sec 2, Th, 4:30-6:30, Jan. 4, 18, Feb. 1, 29, Mar. 7, ChDev 218, King

Spring Spec Term, ★●Sec 3, Th, 4:30-6:30, Mar. 28, Apr. 11, 25, May 9, WullH 220, King

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**EPsy 5260 INTRODUCTORY STATISTICAL METHODS.** 4 credits, §PsyF 5110, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Techniques for organizing and presenting data; descriptive indices of central tendency, variability and bivariate correlation/regression; procedures for making inferences concerning means and proportions. **May be taken S-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 50)

Fall Qtr, ★Sec 1, T, 5:45-8:50, NichH 109, Friedman

Fall Qtr, ★Sec 2, TTh, 4:15-6, NichH 207, Garfield. *A joint Day/Extension class limited to 10 Extension students*

Winter Qtr, ★Sec 3, TTh, 4:15-6, Peik 225, Garfield. *A joint Day/Extension class limited to 10 Extension students*

Winter Qtr, ★Sec 4, W, 5:45-8:50, BuH 123, Hendrix

Spring Qtr, ★Sec 5, TTh, 4:15-6, NichH 109. *A joint Day/Extension class limited to 10 Extension students*

Spring Qtr, ★Sec 6, Th, 5:45-8:50, WullH 140, Davenport

**EPsy 5401 COUNSELING PROCEDURES.** 3 credits, §PsyS 5110, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

For persons whose professional work includes counseling and interviewing; not for licensure as school counselor. Emphasis on counseling relationship and principles of interviewing; case studies, role playing and demonstration. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 18 Extension students)

Fall Qtr, ★Sec 1, M, 4:15-6:45, BuH 125, Erickson

Winter Qtr, ★Sec 2, T, 4:30-7, BuH 125, Erickson

Spring Qtr, ★Sec 3, M, 4:30-7, BuH 125, Wambach

(See also Family Social Science)

**EPsy 5430 FOUNDATIONS OF CAREER DEVELOPMENT.** 3 credits, §PsyS 5210, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Introduction to theory, research, practice; examination of concepts of work, work values, career and career education; application of theory and research to career guidance practice in educational, industrial, and community agency settings. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 18 Extension students)

Fall Qtr, ★Sec 1, T, 4:15-6:45, BuH 125, Hansen

**EPsy 5432 CAREER DEVELOPMENT PROGRAMS AND ORGANIZATIONAL CHANGE.** 3 credits, §PsyS 5332, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Provides knowledge and skills to create and implement programs for a variety of populations and settings; life-roles concept integrated with systematic model of program development; consultation process, organizational intervention, and race, age, and gender issues. **Must be taken A-F.** (Prereq 5431 or 5430 or PsyS 5210 or PsyS 5331 or equivalent or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 18 Extension students)

Spring Qtr, ★Sec 1, T, 4:30-7, BuH 120, Hansen

**EPsy 5434 COUNSELING ADULTS IN TRANSITION.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Theoretical and empirical knowledge to provide bases for analyzing adaptation to transitions; applications of counseling intervention and training in coping skills to cases of life change. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 18 Extension students)

Fall Qtr, ★Sec 1, W, 4:15-6:45, BuH 125, Romano

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**EPsy 5451 SEMINAR: THE COLLEGE STUDENT.** 3 credits, §PsyS 5540, §HiEd 5540, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Psychology and sociology of college students; research concerning diversity of populations, vocational development of students, student society, culture, mental health, underachievement, dropouts, values and attitudes; relevant research methods. **Must be taken A-F.** (Prereq 6 credits psych or edpsych. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with EdPA 5540. A joint Day/Extension class limited to a combined total of 10 Extension students)

Spring Qtr, ★○Sec 1, Th, 4:30-7:15, BuH 123

**EPsy 5461 CROSS-CULTURAL COUNSELING.** 3 credits, §PsyS 5505, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Effect of cross-cultural and cross-national differences in counseling processes. **Must be taken A-F.** (Prereq#. Qualified students may register for graduate credit at the University of Minnesota. Limited to 35)

Fall Qtr, ★Sec 1, M, 6-8:30, BuH 123, Thomas

**EPsy 5600 CHILDHOOD LANGUAGE DEVELOPMENT: CLASSROOM IMPLICATIONS.** 3 credits, §PsyS 5100, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Recent trends and findings in the study of language acquisition and communication; classroom implications including education of exceptional children. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, ○Sec 1, T, 4:40-7:30, ChDev 105,

Turnure

Spring Qtr, ○Sec 2, T, 4:40-7:30, ChDev 105,

Turnure

**EPsy 5601 EDUCATION OF EXCEPTIONAL CHILDREN.** 4 credits, §PsyS 5101, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Introduction to field of special education for classroom teachers and other school personnel. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, ○Sec 1, M, 4:40-8:30, Phys 133,

Knowlton

Spring Qtr, ○Sec 2, W, 4:40-8:30, NichH 207

**EPsy 5604 TRANSITION FROM SCHOOL TO WORK AND COMMUNITY LIVING FOR PERSONS WITH SPECIAL NEEDS.** 4 credits, §PsyS 5104, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Organization and design of training programs to promote independent living and the vocational and community adjustment of persons with disabilities and other at-risk populations; curriculum materials; methods, and organizational strategies for adolescent and adult learners, families, and community service providers. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 20 Extension students)

Spring Qtr, ★○Sec 1, W, 4:40-8:30, ChDev 218

**EPsy 5607 COLLABORATION FOR INCLUSIVE SCHOOL COMMUNITIES.** 3 credits, §PsyS 5107, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Rationale for, implications of, and strategies for including students with unique needs (e.g., disabilities) in general education classroom settings. The importance of creating a sense of community among students and adults in today's heterogenous classrooms and schools is emphasized. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr, ○Sec 1, T, 4:40-7:30, BuH 123,

York

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**EPsy 5608 PARENT AND PROFESSIONAL PLANNING FOR HANDICAPPED STUDENTS.** 3 credits, \$PsyS 5108, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Study and demonstration of constructive approaches to cooperative planning and implementation of education programs by parents, teachers, and persons involved with children who have special needs. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, ★Sec 1, Th, 4:40-7:30, BuH 120

Winter Qtr, ★Sec 2, Th, 4:40-7:30, BuH 120

Spring Qtr, ★Sec 3, Th, 4:40-7:30, PeikH 215

**EPsy 5609 FAMILY-PROFESSIONAL PLANNING FOR PERSONS WITH SEVERE HANDICAPS.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Interdisciplinary course examining the needs of families including children with severe handicaps; emphasis on life cycle needs, service issues, programs of support from infancy through adult years, services from different agencies, disciplines, professional requirements, and responsibilities in serving families. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 30 Extension students)

Winter Qtr, ★Sec 1, W, 4:40-7:30, BuH 125

**EPsy 5612 EDUCATION OF LEARNING-DISABLED CHILDREN.** 3 credits, \$PsyS 5112, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Analysis of considerations in design and conduct of services for learning-disabled children; approaches to education of such children. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 25 Extension students)

Fall Qtr, ★Sec 1, T, 4:40-7:30, ChDev 218,

Espin

Winter Qtr, ★Sec 2, Th, 4:40-7:30, NichH 109

**EPsy 5615 EDUCATIONAL INTERVENTIONS FOR LEARNING DISABILITIES.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Planning, implementing, evaluating academic programs for students with disabilities in written and spoken language, quantitative concepts, and cognitive skills required for learning. **Must be taken A-F.** (Prereq 5612 or PsyS 5112. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 25 Extension students)

Winter Qtr, ★Sec 1, T, 4:40-7:30, ChDev 105, Espin

Spring Qtr, ★Sec 2, T, 4:40-7:30, BuH 123, Espin

**EPsy 5620 INTRODUCTION TO MENTAL RETARDATION.** 4 credits, \$CPsy 5315, \$PsyS 5120, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Issues relating to educational practices; community planning; educational philosophy, administration and organization, and programming. **Must be taken A-F.** (Prereq 5601 or PsyS 5101 or equivalent. Meets concurrently with CPsy 5315. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension students)

Winter Qtr, ★Sec 1, W, 4:40-8:30, ChDev 105, Turnure

**EPsy 5621 METHODS AND MATERIALS FOR STUDENTS WITH MILD TO MODERATE MENTAL RETARDATION.** 4 credits, \$PsyS 5121, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Curriculum content, materials, and methods of instruction for students with mental retardation; preparation of instructional instruments leading to both individual and group teaching expertise. **Must be taken A-F.** (Prereq 5601 or PsyS 5101 or equivalent. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr, ★Sec 1, Th, 4:40-8:30, ChDev 105, Rynders

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**EPsy 5622 PROGRAMS AND CURRICULA FOR LEARNERS WITH MODERATE TO SEVERE DISABILITIES.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Elementary/secondary program design and curricula for learners with severe disabilities. Emphasis on preparing children and youth for integrated, normalized community environments in domestic, leisure, and vocational domains. Discussion of developmentally appropriate programming. Structured observation of learners with severe disabilities required. **May be taken S-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, **Sec 1, T, 4:10-7:30, BuH 120, Hupp**

**EPsy 5624 BIOMEDICAL AND PHYSICAL ASPECTS OF DEVELOPMENTAL DISABILITIES.** 3 credits, \$PsyS 5124, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Selected information in genetics; anatomy, physiology, and kinesiology; central and peripheral nervous system; prenatal, perinatal, and postnatal development; physically disabling conditions; and management of educational procedures. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr, **Sec 1, T, 4:40-7:30, BuH 125**

**EPsy 5625 EDUCATION OF HANDICAPPED INFANTS AND PRESCHOOL CHILDREN WITH DEVELOPMENTAL DISABILITIES.** 3 credits, \$PsyS 5125, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Issues, problems, and practical applications in designing strong programs for young children with all types of handicapping conditions. **Must be taken A-F.** (Prereq 5601 or 5620 or PsyS 5101 or PsyS 5120 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, **Sec 1, W, 4:40-7:30, NichH 207, Rynders**

**EPsy 5626 INSTRUCTION FOR LEARNERS WITH MODERATE TO SEVERE DISABILITIES.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Data-based strategies for school and non-school instruction, including basic measurement principles; assessment, design, implementation, and evaluation of instruction; concept and task analysis; natural and instructional cues, corrections, consequences. **May be taken S-N.** (Prereq 5116 and 5622. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr, **Sec 1, T, 4:10-7:30, NichH 213**

**EPsy 5635 EDUCATION OF STUDENTS WITH PHYSICAL DISABILITIES.** 4 credits, \$PsyS 5135, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Characteristics and abilities; methods and materials for training; observation of teaching situations involving these groups; personal consultation in addition to class hours. **Must be taken A-F.** (Prereq 5601 or PsyS 5101 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, **Sec 1, W, 4:40-8:30, Peikh 225**

**EPsy 5636 EDUCATION OF MULTI-HANDICAPPED LEARNERS WITH SENSORY IMPAIRMENTS.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Characteristics of learners with visual and auditory impairments. Design of instructional programs to remediate or circumvent disabilities, including the use of prosthetic devices. Consideration of related areas of performance that may be affected by sensory impairments. **May be taken S-N.** (Prereq 5601 or PsyS 5101. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr, **Sec 1, M, 4:40-7:10, ChDev 218**

\* Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



**EPsy 5640 PSYCHOLOGICAL, SOCIAL, AND EDUCATIONAL ASPECTS OF DEAFNESS.** 3 credits, §PsyS 5140, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Historical and current societal perceptions of deaf; analysis of effects and patterns of hearing loss on children and adults; intelligence, personal and social adjustment, effect of the psychological processes on acquisition of language, speech, and speech reading skills. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, ○Sec 1, W, 4:40-7:30, PtH 204

**EPsy 5641 MODELS OF SERVICE DELIVERY TO STUDENTS WITH HEARING LOSS.** 3 credits, §PsyS 5141, 5144, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Programmatic and systems of support for infants, children, and youth who are deaf or hard of hearing; educational delivery system models, curriculum and material adaptation, and consultation skills. **Must be taken A-F.** (Prereq 5644, PsyS 5144, or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr, ○Sec 1, Th, 4:40-7:30, FolH 134, Rose

**EPsy 5642 CLASSROOM COMMUNICATION THROUGH AMERICAN SIGN LANGUAGE.** 2 credits, tuition\*: Resident \$187; Non-resident \$542.30; Resident Graduate credit \$236; Non-resident Graduate credit \$519.20; Resident Graduate School credit \$431; Non-resident Graduate School credit \$948.20.

ASL form and function. Emphasis on vocabulary production, use of ASL phrase structure rules and use of classifiers and other ASL grammatical features needed by professionals working with children who are deaf. **Must be taken S-N.** (Prereq Educ or grad student, Fingerspelling skills and conversational sign skills, #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, ○Sec 1, Arr, Holte, Rose

Winter Qtr, ○Sec 2, Arr, Holte, Rose

Spring Qtr, ○Sec 3, Arr, Holte, Rose

**EPsy 5643 LANGUAGE FOR DEAF/HARD OF HEARING CHILDREN.** 4 credits, §PsyS 5143, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Functional language development in communicatively disabled persons; overview of language curricula and programming strategies, pertinent research and models of instruction for use in the educational environment. **Must be taken A-F.** (Prereq 5640 or PsyS 5140 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, ○Sec 1, T, 1-4:20, PtH 204, Rose

**EPsy 5644 LANGUAGE PROGRAMMING FOR CHILDREN WITH HEARING LOSS.** 3 credits, §PsyS 5144, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Programs and practices focusing on the development of language in deaf and hard of hearing infants, children, and youth; comparative study of language development among deaf, hard of hearing, and hearing persons. **Must be taken A-F.** (Prereq 5643, PsyS 5143, or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr, ○Sec 1, M, 1:25-4, PtH 204, Rose

**EPsy 5646 READING AND INSTRUCTIONAL PRACTICES WITH DEAF AND HARD OF HEARING STUDENTS.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Focuses on the knowledge and skills required to assess, plan, and implement instruction for individuals with hearing loss. Emphasis on theoretical and programmatic issues in the acquisition of reading and writing skills, curricular adaptations, and effective instructional approaches used with hearing-impaired learners. **Must be taken A-F.** (Prereq 5643, PsyS 5143, or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr, ○Sec 1, T, 4:40-8:30, NichH 207, Schultz

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**EPsy 5647 AURAL AND SPEECH PROGRAMMING FOR CHILDREN WITH HEARING LOSS.** 4 credits, §PsyS 5147, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Fundamentals of the speech and hearing mechanisms; survey of instructional practices and technology-based assistive devices to develop auditory and speech skills. Strategies to adapt classroom environment. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr, ★Sec 1, T, 12:20-4, PtH 204, Rose

**EPsy 5648 MODES OF COMMUNICATION FOR PERSONS WITH DISABILITIES.** 3 credits, §PsyS 5148, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Theoretical and applied study of selection and application of alternative communication modalities; assessment and development of modes including gestures, speech reading, cued speech, sign language, form boards, and technology-based systems. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr, ★Sec 1, Th, 1:25-4, ChDev 218, Rose

**EPsy 5651 MANAGING PROBLEM BEHAVIOR IN THE CLASSROOM.** 3 credits, §PsyS 5151, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Typical patterns of problem behavior in classroom settings; relationships to teacher mental health; simulation of methods for prevention and management. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr, Sec 1, W, 4:40-7:30, BuH 125

**EPsy 5656 EDUCATIONAL NEEDS OF STUDENTS WITH EMOTIONAL DISTURBANCE OR BEHAVIORAL DISORDERS.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Preparation for specialists: Educational characteristics, educational interventions, teaching of social behavior, legal and ethical issues. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 25 Extension students)

Fall Qtr, ★Sec 1, W, 4:40-7:30, BuH 120, Wilderson

Winter Qtr, ★Sec 2, M, 4:40-7:30, PeikH 155

**EPsy 5657 EDUCATIONAL INTERVENTIONS FOR STUDENTS WITH EMOTIONAL DISTURBANCE OR BEHAVIORAL DISORDERS.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Preparation for specialists: Assessment and planning procedures, interagency cooperation, career preparation and transition for EBD students. **Must be taken A-F.** (Prereq 5656. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 25 Extension students)

Winter Qtr, ★Sec 1, W, 4:40-7:30, BuH 120, Wilderson

Spring Qtr, ★Sec 2, W, 4:40-7:30, JonesH 2

**EPsy 5660 SUPERVISION AND ADMINISTRATION OF SPECIAL EDUCATION.** 3 credits, §PsyS 5160, §EdPA 5103, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Procedures in establishing and improving educational programs for exceptional children. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with EdPA 5103. A joint Day/Extension class limited to a combined total of 10 Extension students)

Fall Qtr, ★Sec 1, M, 4:30-7, JonesH 10

Spring Qtr, ★Sec 2, W, 4:30-7, NichH 209

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**EPsy 5671 LITERARY BRAILLE.** 3 credits, \$PsyS 5171, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Mastery of literary Braille code; analysis of specialized equipment emphasizing use of Braille writers, slates, and computers for Grade 2 Braille transcriptions. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr, ●Sec 1, Th, 4:40-7:30, BuH 125, Knowlton

**EPsy 5672 ADVANCED BRAILLE.** 3 credits, \$PsyS 5172, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Mastery of Nemeth Code of mathematics, introduction to foreign languages, computer notation and consideration of Braille textbook formats and techniques; consideration of music Braille. **Must be taken A-F.** (Prereq 5671 or PsyS 5171. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr, ●Sec 1, Th, 4:40-7:30, BuH 125, Knowlton

**EPsy 5680 EDUCATION OF THE DISADVANTAGED.** 3 credits, \$PsyS 5180, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Educational needs of children handicapped by behavior related to deficiencies of physical and/or cultural environment; adaptations of educational programs. **Must be taken A-F.** (Prereq 12 credits in sociology, psychology, educational psychology. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 20 Extension students)

Fall Qtr, ★●Sec 1, W, 4:40-7:30, ChDev 216

Spring Qtr, ★●Sec 2, W, 4:40-7:30, NichH 201

**EPsy 5681 METHODS AND MATERIALS FOR INFANTS AND PRESCHOOL CHILDREN WITH DEVELOPMENTAL DISABILITIES.** 4 credits, \$PsyS 5181, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Methods, materials, conceptual models for maximizing educational development of young children with all types of handicapping conditions. **Must be taken A-F.** (Prereq 12 cr in education or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr, ●Sec 1, M, 4:40-8:30, ChDev 105, McEvoy

**EPsy 5700 ASSESSMENT AND DECISION MAKING IN SPECIAL EDUCATION.** 3 credits, \$PsyS 5200, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

For teachers and other educational personnel; identifying the needs of handicapped students; planning, monitoring, evaluating instructional programs; practice in use of standardized devices and development of clinical measures for handicapped students.

**Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 30 Extension students)

Fall Qtr, ★●Sec 1, Th, 4:40-7:30, Peikh 155, Deno

Winter Qtr, ★●Sec 2, W, 4:40-7:30, ChDev 216, Marston

**EPsy 5701 PRACTICUM: SPECIAL EDUCATION.** Credits arr, tuition\* each credit: Resident \$93.50; Non-resident \$271.15; Resident Graduate credit \$118; Non-resident Graduate credit \$259.60; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Supervised experience in teaching or related work in schools or other agencies serving exceptional children. **Must be taken S-N.** (Prereq #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, ●Sec 1

Fall Qtr, ●Sec 2, Knowlton

Fall Qtr, ●Sec 3

Fall Qtr, ●Sec 4, Wilderson

Winter Qtr, ●Sec 5, Espin

Winter Qtr, ●Sec 6, Knowlton

Winter Qtr, ●Sec 7

Winter Qtr, ●Sec 8, Wilderson

Spring Qtr, ●Sec 9, Espin

Spring Qtr, ●Sec 10, Knowlton

Spring Qtr, ●Sec 11

Spring Qtr, ●Sec 12

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**EPsy 5703 PRACTICUM EXPERIENCE: SPECIAL EDUCATION.** Credits arr, tuition\* each credit: Resident \$93.50; Non-resident \$271.15; Resident Graduate credit \$118; Non-resident Graduate credit \$259.60; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Supervised experience in teaching or related work in schools or other agencies serving exceptional children. **Must be taken A-F.** (Prereq #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, **Sec 1**, arr

Fall Qtr, **Sec 2**, arr, McEvoy

Fall Qtr, **Sec 3**, arr, Rynders

Winter Qtr, **Sec 4**, arr, Hupp

Winter Qtr, **Sec 5**, arr, McEvoy

Winter Qtr, **Sec 6**, arr, Rynders

Spring Qtr, **Sec 7**, arr, Hupp

Spring Qtr, **Sec 8**, arr, McEvoy

Spring Qtr, **Sec 9**, arr, Rynders

**EPsy 5704 WORKSHOP: INTERVENTIONS AND PRACTICES IN EDUCATIONAL AND HUMAN SERVICE PROGRAMS.** Credits arr, tuition\* each credit: Resident \$93.50; Non-resident \$271.15; Resident Graduate credit \$118; Non-resident Graduate credit \$259.60; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Concepts, issues, and practices; development of educational and psychological support services in school and human service settings. For practicing professionals. **Must be taken S-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, **Sec 1**, Arr, Abery

Winter Qtr, **Sec 2**, Arr, Abery

Spring Qtr, **Sec 3**, Arr, Abery

**EPsy 5710 CONTEMPORARY SERVICES FOR PERSONS WITH DEVELOPMENTAL DISABILITIES.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

An introductory survey of characteristics and service needs of persons with substantial developmental disabilities using multidisciplinary approaches. Addresses changing concepts, models of services,

issues related to promoting the self determination, independence, productivity, and integration of persons into the community. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 25 Extension students) Fall Qtr, **Sec 1**, T, 4:40-7:30, BuH 123, York

**EPsy 5849 ASSESSMENT OF THE PRE-SCHOOL CHILD.** 3 credits, \$PsyS 5549, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Review of assessment of children ages 0-5 from a developmental perspective; overview of normal and abnormal development; issues and techniques in cognitive, social, and emotional assessment; early education programs. **May be taken S-N.** (Prereq statistics or measurement course or grad course in assessment. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr, **Sec 1**, Th, 4:40-7:30, PtH 204, McConnell

**EPsy 5850 CREATING FAMILY-SCHOOL PARTNERSHIPS FOR EDUCATIONAL SUCCESS: FAMILIES, SCHOOLS, AND EDUCATIONAL OUTCOMES.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

The theoretical and empirical bases for creating family-school partnerships to enhance student success in school are described. Essential partnership variables to create a collaborative ethic between home and school and models/programs for K-12 are covered. Specific home-school partnership strategies to address academic, social, and behavioral concerns for individual students and systems-level concerns, such as discipline and violence, are described. Practical home-school partnership strategies for use by educational personnel (teachers, psychologists, counselors, administrators) to involve all families in education are emphasized. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, **Sec 1**, M, 4-7:15, Peikh 165, Christenson

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**EPsy 5900 INDEPENDENT STUDY.** Credits arr (max 12 cr). Tuition\* each credit: Resident \$93.50; Non-resident \$271.15; Resident Graduate credit \$118; Non-resident Graduate credit \$259.60; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Independent study in areas of special interest to students. **Must be taken A-F.** (Prereq #. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr, Sec 1, Arr  
 Winter Qtr, Sec 2, Arr  
 Spring Qtr, Sec 3, Arr

## Electrical Engineering (EE)

(4-174 EE/CSci: 625-3300)

### Institute of Technology

Textbooks for most EE courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

Dave Lo, Adjunct Professor of Electrical Engineering  
 Robert Oswald, Unisys Corporation

The Department of Electrical Engineering makes no academic distinction between students in day class, evening class, or distance education sections. All students in a given course have the same examinations and are assigned course grades from a common standard. The final examination is administered at the time specified for the day section, and is announced the first class session. Students unable to take the final at the scheduled time must drop the course and will have tuition and fees fully reimbursed.

Through registration in Extension Classes, students will be able to complete most credits, but not all credits, toward a bachelor's degree in Electrical Engineering. The degree then may be completed after a limited amount of day school or distance education attendance. Students admitted to IT must have an adviser and get approval of their one-year plan.

CEE Independent Study offers a Bachelor of Electrical Engineering program using distance education without class attendance. Students receive videotaped class lectures and mail in lesson assignments; they receive graded work and solutions by return mail. For information, contact academic adviser Teresa Fruen at 625-5041 (e-mail [tfruen@mail.cee.umn.edu](mailto:tfruen@mail.cee.umn.edu)).

Except under unusual circumstances, the curriculum which applies to an E.E. major at the time of admission to the Upper Division shall be considered to specify the course requirements for graduation for a period up to four years. Thus, after admission to the Upper Division, a student is generally insulated from any change in degree requirements for a maximum of four years, although the student always has the option of satisfying the requirements in effect at the time of program completion.

A student may *not* transfer upper division courses (courses numbered 3000 or higher, except for EE 3009, EE 3010, EE 3351, and EE 3352) into the E.E. degree program unless he or she was admitted to the Upper Division in the Electrical Engineering Curriculum before taking the course or courses and the course or courses have had the written prior approval of the student's E.E. adviser. Extension courses taken while a student is on academic probation may not be applied toward graduation requirements or removal of probationary conditions without the explicit prior permission of the Electrical Engineering Scholastic Standards Committee. It is the responsibility of the student to follow those rules.

*Students interested in the degree should see the Degrees and Certificates section of this Bulletin.*

**Senior Design Project**—See EE 5450 below.

### EE 0001 REFRESHER COURSE FOR ELECTRICAL ENGINEERS.

No credit, tuition\*: \$159. A review of electrical engineering fundamentals required to pass the Minnesota Professional Engineering Examination in electrical engineering. It is designed to aid the electrical engineer to prepare for the P.E. examination by presenting an organized review of material ordinarily contained in an electrical engineering college curriculum. The primary emphasis is on problem solving with orientation as close as possible to the type of question contained in the examination. (Prereq B.S. in electrical engineering, passing the E.I.T. examination, and four years of electrical engineering experience)  
 Winter Qtr, Sec 1, Th, 6:20-8:40, MechE 102

### EE 1400 CIRCUITS LABORATORY.

1 credit, tuition\*: Resident \$79.50; Non-resident \$230.55. Laboratory to accompany 3009 and 3010. (Prereq IT student, 3009 or ¶3009. Limited to 14)  
 Spring Qtr, ★Sec 1, M, 8:10-9:55, EE/CSci 3170  
 Spring Qtr, ★Sec 2, W, 8:10-9:55, EE/CSci 3170

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**EE 3009 LINEAR CIRCUITS I.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60.

Physical principles underlying the modeling of circuit elements. Two- and three-terminal resistive elements, Kirchoff's laws. Simple resistive circuits. Linearity in circuits. First-order circuits. Circuits in sinusoidal steady state. **Must be taken A-F.** (Prereq IT student, Math 3261, Phys 1253. Limited to 56)

Spring Qtr, ★Sec 1, MW, Lect, 6:10-8:10, MechE 212

**EE 3010 LINEAR CIRCUITS II.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60.

Energy and power in AC circuits. Transformers. Laplace transform techniques of circuit analysis. Frequency response. Two ports. **Must be taken A-F.** (Prereq IT student, at least C grades in 3009, Math 3261, Phys 1253 or ¶Phys 1253. Limited to 75)

Fall Qtr, ★Sec 1, TTh, 6:10-8:10, EE/CSci 3115

**EE 3011 SIGNAL ANALYSIS.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60.

Fourier methods of analysis. Laplace transforms and applications. Z-transforms. Frequency and time-domain responses. (Prereq upper division EE major; 3010. Limited to 75)

Winter Qtr, ★Sec 1, TTh, 6:10-8:10, EE/CSci 3125

**EE 3012 SYSTEM DESIGN.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60.

Continuous, discrete-time systems. Feedback: stability, applications. **Must be taken A-F.** (Prereq upper division EE major, EE 3011. Limited to 75)

Spring Qtr, ★Sec 1, TTh, 6:10-8:10, EE/CSci 3125

**EE 3060 SEMICONDUCTOR DEVICES.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60.

Elementary semiconductor physics; physical description of pn junction diodes, bipolar junction transistors and field-effect transistors. (Prereq upper division EE or CSci or ME major, 3010 or ¶3010, Phys 1291 and 3501 or Phys 1254. Limited to 75)

Fall Qtr, ★Sec 1, MW, 6:30-8:30, EE/CSci 3111

**EE 3061 ANALOG ELECTRONICS.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60.

Small signal models for the BJT and FET. Elementary amplifiers. Differential and operational amplifiers; applications. **Must be taken A-F.** (Prereq upper division EE or CSci or ME major, 3010, 3060, 3400 or ¶3400. Limited to 75)

Winter Qtr, ★Sec 1, MW, 6:30-8:30, EE/CSci 3111

**EE 3062 DIGITAL ELECTRONICS.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60.

Stability and feedback amplifiers, operational amplifier structures; implementation of digital circuits with bipolar and field-effect transistors; application to inverters, gates, flip-flops, logic arrays, and storage elements. **Must be taken A-F.** (Prereq upper division EE or CSci or ME major, 3061, 3351, 3401 or ¶3401. Limited to 75)

Spring Qtr, ★Sec 1, MW, 6:10-8:10, EE/CSci 3115

**EE 3110 ELECTRIC AND MAGNETIC FIELDS.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60.

Field properties of electricity and magnetism. Interaction with dielectric and magnetic materials. **Must be taken A-F.** (Prereq upper division EE or ME major, at least C grades in Phys 1291 or Phys 1254, Math 3252. Limited to 75)

Winter Qtr, ★Sec 1, MW, 6:10-8:10, EE/CSci 3125

**EE 3111 ELECTROMAGNETIC WAVES.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60.

Time-varying electromagnetic fields. Propagation and reflection of electromagnetic waves. Metallic and optical waveguides. (Prereq upper division EE major, 3110. Limited to 75)

Spring Qtr, ★Sec 1, MW, 6:10-8:10, EE/CSci 3125

**EE 3351 INTRODUCTION TO LOGIC DESIGN.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60. (IS)

Boolean algebra and logic gates. Combinational logic: simplification and design examples. Sequential logic and design of synchronous sequential logic systems. Integral laboratory. **Must be taken A-F.** (Prereq sophomore standing in IT. Sec 1 and 2 lectures meet concurrently. Limited to 24)

Winter Qtr, ★Sec 1, M, Lect, 6:10-8:40, EE/CSci 3115; T, Lab, 6:10-8:10, EE/CSci 2178

Winter Qtr, ★Sec 2, M, Lect, 6:10-8:40, EE/CSci 3115; W, Lab, 6:10-8:10, EE/CSci 2178

**EE 3352 INTRODUCTION TO MICROPROCESSORS.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60. (IS)

Basic computer organization and assembly language programming. Instruction types and addressing modes. Subroutines. Assembler usage. Programming techniques. Integral laboratory. **Must be taken A-F.** (Prereq sophomore standing in IT, CSci 3113. Sec 1 and 2 lectures meet concurrently. Limited to 16)

Spring Qtr, ★Sec 1, M, Lect, 6:10-8:40, EE/CSci 3111; T, Lab, 6:10-8:10, EE/CSci 3130

Spring Qtr, ★Sec 2, M, Lect, 6:10-8:40, EE/CSci 3111; W, Lab, 6:10-8:10, EE/CSci 3130

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**EE 3400-3401-3402 JUNIOR ELECTRICAL ENGINEERING LABORATORY.** 2 credits each quarter, tuition\* each quarter: Resident \$187; Non-resident \$542.30.

Experiments in circuits, electronics, and electromagnetic fields. **Must be taken A-F.** (Prereq EE major, 1400, 3060 or ¶3060 for 3400...3400, 3011 or ¶3011, 3061 or ¶3061 for 3401...3401, 3062 or ¶3062 for 3402 or #. Limited to 14)

Fall Qtr, 3400, ★Sec 1, Th, 6:10-9:10, EE/CSci 3166

Winter Qtr, 3401, ★Sec 1, Th, 6:10-9:10, EE/CSci 3166

Spring Qtr, 3402, ★Sec 1, Th, 6:10-9:10, EE/CSci 3166

**EE 5002 DIGITAL SIGNAL PROCESSING.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45.

General concepts of signal processing; discrete-time systems and digital filters. *This course is offered through Extension Classes on a rotating basis of two years on, one year off, two years on, and so forth. See EE 5003 laboratory below.* (Prereq upper division EE major or grad IT major, 3012 or #. **May not be taken for graduate credit.** Limited to 65)

Spring Qtr, ★Sec 1, T, 6:10-8:40, EE/CSci 3111

**EE 5003 DIGITAL SIGNAL PROCESSING LABORATORY.** 1 credit, tuition\*: Resident \$93.50; Non-resident \$271.15.

Computer experiments in digital signal processing and digital filter design. *This course is offered through Extension Classes on a rotating basis of two years on, one year off, two years on, and so forth. Must be taken A-F.* (Prereq upper division EE major or grad IT major, EE 5002 or #. **May not be taken for graduate credit.** Limited to 12)

Spring Qtr, ★Sec 1, M, 6:10-8:10, EE/CSci 2170

Spring Qtr, ★Sec 2, W, 6:10-8:10, EE/CSci 2170

**EE 5202 ANALOG COMMUNICATION.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45.

Selected topics in analog communication systems; amplitude and frequency modulation; spectral analysis and effect of noise in modulation systems; detection. *This course is offered through Extension Classes once every four years. See EE 5240 laboratory below.* (Prereq upper division EE or grad IT major, 3012, Stat 3091 or #. **May not be taken for graduate credit.** Limited to 65)

Fall Qtr, ★Sec 1, TTh, 6:10-8:40, EE/CSci 3111

**EE 5203 INTRODUCTION TO DIGITAL COMMUNICATION.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45.

Selected topics in pulse and digital communication systems; pulse modulation systems, pulse-code modulation. Data transmission systems including phase-shift keying and frequency-shift keying. Effect of noise. Coding. *This course is offered through Extension Classes once every four years. See EE 5241 laboratory below.* **Must be taken A-F.** (Prereq upper division EE or grad IT major, 3012, 5202, Stat 3091 or #. **May not be taken for graduate credit.** Limited to 65)

Winter Qtr, ★Sec 1, TTh, 6:10-8:40, EE/CSci 3111

**EE 5240 ANALOG COMMUNICATIONS LABORATORY.** 1 credit, tuition\*: Resident \$93.50; Non-resident \$271.15.

*This course is offered through Extension Classes once every four years. See EE 5202 above. Must be taken A-F.* (Prereq EE sr or grad IT major, 3402 or ¶3402, 5202 or ¶5202. **May not be taken for graduate credit.** Limited to 12)

Fall Qtr, ★Sec 1, M, 6:10-8:10, EE/CSci 2164

**EE 5241 DIGITAL COMMUNICATIONS LABORATORY.** 1 credit, tuition\*: Resident \$93.50; Non-resident \$271.15.

*This course is offered through Extension Classes once every four years. See EE 5203 above. Must be taken A-F.* (Prereq EE sr or grad IT major, 3402 or ¶3402, 5203 or ¶5203. **May not be taken for graduate credit.** Limited to 12)

Winter Qtr, ★Sec 1, M, 6:10-8:10, EE/CSci 2164

**Senior Design Project**—The following course is required for the completion of a degree in electrical engineering. It is offered only through day school registration. Enrollment is limited. Call 625-3300, Department of Electrical Engineering, for further information.

**EE 5450 SENIOR DESIGN PROJECT.** 2 degree credits. Team participation in formulation and solving of open-ended design problems. Oral and written presentations. (Prereq EE senior, 3012, 3062, 3110, 3351, 3352, 3402)

## Elementary Education

See Curriculum and Instruction (CI)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

### Employee Benefits Specialist, Certified (CEBS)

(322 Wesbrook Hall, Department of Extension  
Classes: 626-8713)

Joe Harten, Lecturer  
Mary Komornicka, Lecturer  
Katie Lewis, Lecturer  
Patrick Pechacek, Lecturer  
Gerald Swarensky, Lecturer  
Andrew Whitman, Professor, Industrial Relations  
Center

Employee Benefits Specialist courses focus on the fundamental principles underlying the design and operation of employee benefit plans. They are designed for individuals who have responsibilities for employee benefit plans or an interest in the field. 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.

These offerings also provide formal class work for persons in the Certified Employee Benefits Specialist (CEBS) Program. The CEBS program is a 10-course professional designation program sponsored jointly by the International Foundation of Employee Benefit Plans and the Wharton School of the University of Pennsylvania. This program gives persons the opportunity to earn a professional designation: Certified Employee Benefit Specialist. Up to the present time, Continuing Education and Extension/University College offers all of the 10 CEBS courses, several each academic year.

In January 1996, the CEBS program will introduce computer-based testing (CBT). CBT will provide professionals pursuing CEBS certification with such advanced services as increased test-taking opportunities, immediate scoring, and a quieter and more secure test environment. Testing will be available virtually year-round. Because they will not be limited to two test dates per year, candidates will be able to plan their exam schedules based on individual needs. If you have not received information on the new testing arrangements, contact the CEBS Foundation at the address and telephone which follow.

**For a CEBS brochure listing courses and requirements of the program, please write to:** CEBS Registrations, International Foundation of Employee Benefit Plans, P.O. Box 69, Brookfield, WI 53008; or call (414) 786-6700.

**Note:** All CEBS courses have been approved by the Commissioner of Commerce for insurance continuing education credit. **CEBS courses may be taken A-F (letter grade) or S-N (satisfactory/no credit).**

**CEBS 0001C (I) EMPLOYEE BENEFITS CONCEPTS AND MEDICAL CARE BENEFITS.** 4 certificate credits, tuition\*: \$318.

Begins with an overview of the environment of employee benefit plans and covers hospital plans, surgical/medical expense plans, major medical plans, dental and vision care, and health care cost containment techniques. The new and/or expanded topics in the revised course include managed care, long-term care, health maintenance organization (HMOs), preferred provider organizations (PPOs), and retiree medical benefits. (No prereq)

Fall Qtr, Sec 1, W, 6-9, AmundH 116, Pechacek, Harten

**CEBS 0002C (II) DESIGN AND ADMINISTRATION OF LIFE, DISABILITY INCOME, AND OTHER WELFARE BENEFIT PLANS.** 4 certificate credits, tuition\*: \$318.

Covers the group insurance mechanism, life insurance benefits, short- and long-term disability income, employee-assistance programs, and dependent care arrangements. Also includes expanded coverage of death benefits and public sector disability income benefits, flexible benefits, flexible spending accounts, as well as new subject areas such as family leave, unemployment benefits, employee discounts, educational benefits, credit unions, and management topics. (No prereq)

Winter Spec Term, Sec 1, W, 6-9, Jan. 31-Apr. 3, 1996, Arch 25, Pechacek, Harten. *No late fee through Jan. 24*

**CEBS 0003C (III) RETIREMENT PLANS: BASIC FEATURES AND DEFINED CONTRIBUTION APPROACHES.** 4 certificate credits, tuition\*: \$318.

After a historical introduction of private pension plan development, this course reviews the objectives of benefit plan design. It provides an analysis of the differences between defined benefit and defined contribution plans and gives an overview of the legal requirements (tax and non-tax) that must be satisfied by qualified retirement plans. It explains defined contribution plans: money purchase, profit sharing, thrift and savings, employee stock ownership plans (ESOPs), 401(k) plans, and simplified employee pensions (SEPs). Also included are individual approaches to retirement plan design: IRAs, Keogh plans, and 403(b) annuities for the nonprofit sector. (No prereq)

Fall Qtr, Sec 1, T, 6-9, Arch 35, Komornicka

\* Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



**CEBS 0004C (IV) RETIREMENT PLANS: DEFINED BENEFIT APPROACHES AND PLAN ADMINISTRATION.** 4 certificate credits, tuition\*: \$318.

After an overview of the retirement aspects of Social Security, defined benefit features are analyzed, and hybrid approaches (cash balance and target benefit plans) are discussed. Other topics are actuarial and accounting aspects of defined benefit plan sponsorship, basic concepts of investing pension assets, a comparison of the trust fund approach with the insured approach to plan funding, the implications of the plan termination insurance program of the Pension Benefit Guaranty Corporation (PBGC) for both terminating and ongoing sponsors and their employees, the taxation of retirement benefits, and nonqualified approaches to providing retirement income. (No prereq)

Winter Spec Term, Sec 1, T, 6-9, Jan. 30-Apr. 2, AmundH 116, Lewis. *No late fee through Jan. 23*

**CEBS 0005C (V) CONTEMPORARY LEGAL ENVIRONMENT OF EMPLOYEE BENEFIT PLANS.** 4 certificate credits, tuition\*: \$318.

Covers the legal system and basic legal rights and responsibilities. It provides a general understanding of the legal environment, focusing on those legal concepts and principles of significance in employee benefit planning and administration. (No prereq)

Fall Qtr, Sec 1, Th, 6-9, EE/CSci 2260

**CEBS 0006C (VI) ACCOUNTING AND FINANCE.** 4 certificate credits, tuition\*: \$318.

Places emphasis on the financial and accounting concepts essential in the administration of employee benefit plans. The role of accounting as a system of communicating information to users inside and outside an organization is discussed. Concepts, principles, and techniques of financial management are a major part of this course. (No prereq)

Winter Spec Term, Sec 1, M, 6-9, Jan. 29-Apr. 1, 1996, AmundH 162, Swarensky. *No late fee through Jan. 22*

**CEBS 0007C (VII) ASSET MANAGEMENT.** 4 certificate credits, tuition\*: \$318.

Focuses on asset management in the context of the investment of pension plan assets. Subjects covered include securities markets, stock and bond valuation and analysis, portfolio theory, investment policy, and federal securities regulation. (No prereq)

Spring Spec Term, Sec 1, T, 6-9, Apr. 23-June 25, 1996, EE/CSci 2260. *No late fee through Apr. 16*

**CEBS 0008C (VIII) HUMAN RESOURCES AND COMPENSATION ADMINISTRATION.** 4 certificate credits, tuition\*: \$318.

Examines human resources management and compensation administration. Includes human resource planning, wage determination, employee benefits, and non-economic rewards. Also includes institutional and economic issues such as seniority, management rights, and union security. (No prereq)

Spring Spec Term, Sec 1, M, 6-9, Apr. 22-June 24, 1996, AkerH 319. *No late fee through Apr. 15*

## Engineering

**Engineering**—Extension Classes and the Institute of Technology offer regular IT classes in several areas of engineering. These are listed under Aerospace Engineering and Mechanics, Civil Engineering, I of T, Electrical Engineering, Industrial Engineering/Operations Research, Materials Science and 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. Check the Institute of Technology listing for I of T 0001, *Fundamentals of Engineering Review*, which is the refresher course for the Engineer-in-Training Examination (E.I.T.). For information on advanced Professional Engineer (P.E.) review courses, see listings for CE 0005, EE 0001, and ME 0001C.

*Further details may be obtained by contacting the Office of Student Affairs, Institute of Technology, 105 Lind Hall, 207 Church Street S.E., University of Minnesota, Minneapolis, Minnesota 55455; (612) 624-5091.*

**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 531. For further information, call CEE Counseling, 625-2500.

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

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## Course Descriptions

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**Please see the following departmental listings for course offerings:**

Aerospace Engineering and Mechanics  
Chemistry  
Civil Engineering  
Computer Science  
Electrical Engineering  
Engineering  
English (Composition and Communication)  
Engineering Graphics (Mechanical Engineering)  
Geological Engineering (Civil Engineering)  
Industrial Engineering/Operations Research  
Institute of Technology  
Mathematics  
Mechanical Engineering  
Materials Science and Engineering  
Physics

(See also Comp 3031, Technical Writing for Engineers)

### Engineering Graphics

See Mechanical Engineering

### English

(207 Lind Hall: 625-3363)

#### College of Liberal Arts

Textbooks for most Engl and EngW courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

(See also Composition and Communication; Interdepartmental Study courses, page 260; and *Writing and Literature* in Compleat Scholar noncredit section)

Your attention is called to the Master of Arts in English. See the Degrees and Certificates section of this Bulletin.

Christopher Anson, Associate Professor  
Carol Bly, Lecturer  
Lillian Bridwell-Bowles, Associate Professor  
Robert Brown, Associate Professor  
Julie A. Cox, Teaching Assistant  
Michael Dennis Browne, Professor  
Jigna Desai, Teaching Assistant  
Lonnie Durham, Assistant Professor Emeritus  
Genevieve Escure, Professor  
Peter Firchow, Professor  
M. J. Fitzgerald, Associate Professor  
Norman Fruman, Professor  
Philip Furia, Professor

Shirley Nelson Garner, Professor  
Arthur Geffen, Associate Professor  
Edward M. Griffin, Professor  
Patricia Hampl, Professor  
Gordon Hirsch, Professor  
Karen Hoyle, Professor  
Dennis Hurrell, Professor Emeritus  
Angela Karstadt, Teaching Assistant  
Archibald I. Leyasmeyer, Associate Professor  
David Luke, Assistant Professor  
Andrew MacLeish, Professor  
Donald Meisenheimer, Teaching Assistant  
Char A. Miller, Teaching Assistant  
Valerie Miner, Associate Professor  
Paula Rabinowitz, Associate Professor  
Donald Ross, Professor  
Edward Savage, Professor Emeritus  
Robert Solotaroff, Professor  
Madelon Sprengnether, Professor  
Ellen Stekert, Professor  
Charles Sugnet, Associate Professor  
Joel Weinsheimer, Professor

**A major in English can be completed in the evening.** Group information meetings are held quarterly. Call (612) 625-4592 for times and places.

The Department of English encourages students to purchase *The English Major Guidebook* at Copies on Campus, Coffman Union room 40. Included in this "must own" text for all English majors are current requirements, new requirements which went into effect August 1994, a "cosmic syllabus," faculty profiles, "tools of the trade," opportunities on and off campus, career resources, how to apply to graduate and professional schools, and more.

#### B.A. Major Sequence

**Required Preparatory Courses**—To be considered for acceptance into the major, all students must present the following: evidence of status as a College of Liberal Arts (CLA) student; a minimum of 60 degree credits; a minimum of 16 credits in English and/or English Writing course work (not including composition courses); an English GPA of at least 2.50; and results of the College English composition test. The prerequisite English courses must include at least one 4-credit 3000-level literature course, preferably Engl 3008, Techniques of Literary Study. Students are advised to maintain a portfolio of course papers, with instructors' comments, and to refer frequently to the *English Major Guidebook*. Acceptance to full major status is prerequisite to registering in 5000-level courses and to requesting a place in the required senior seminar course (Engl 3960 or EngW 3960). Students also should pay particular attention to the *department resident requirement* stated below.

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★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

CLA students who declare English as their major objective will be classified as "pre-Engl" by CLA and the department (by filing a formal intention to major in English in the Undergraduate Studies Office, 204 Lind Hall) until they meet the above prerequisites, apply formally for major status following the written procedures available in the English Undergraduate Studies Office, and are accepted by the faculty admissions committee. Written procedures require applicants to submit a portfolio of writing samples, including at least one paper written in a 3000-level English literature course. To request complete information, call the Undergraduate Studies Office, 204 Lind Hall, at (612) 625-4592. Address mail to Undergraduate Studies, Department of English, 207 Lind Hall, 207 Church Street S.E., Minneapolis, MN 55455.

**Deadlines for application**—The Friday of the first full week of each quarter (fall, winter, spring) annually. No applications are reviewed in the summer. 1995-96 deadlines are Sept. 29, 1995; Jan. 12, 1996; and Mar. 29, 1996.

**Application limits**—Admission is not guaranteed. Students may apply to the major only twice, and are advised to consult with CLA and department advisers.

Upon admission, students will plan their programs in conference with a departmental major adviser.

**English Composition Test**—The test is offered every Wednesday at 3 p.m. only by referral from the English Undergraduate Studies Office, 204 Lind Hall, (612) 625-4592. Cost is approximately \$17 (subject to change). Plan to take the test the quarter before applying for English major status in order to have the score reported to the Undergraduate Studies Office by the application to major deadline.

**Major Requirements**—Twelve 4-credit courses in English, English Writing, or Composition (beyond those taken to satisfy the current CLA composition requirement) and Engl 3961 or Engl 3961H (1 cr): 11 courses at the 3xxx or 5xxx courses, including at least three at the 5xxx level, and including the following distribution:

*Foundation Courses* (12 cr): Engl 3008; and any two of Engl 3111, 3112, 3113. Extension-only English majors may take Engl 3111, 3112, 3113 in Extension Independent Study, or may enroll in any two "age courses" (3115, 3116, 3117, 3118, 3119) which represent two different centuries of pre-20th century British literature

*Shakespeare* (4 cr): Engl 3241 or 3242, or 3xxx Shakespeare in London through the Global Campus (telephone [612] 625-3379 for information)

*English language* (4 cr): Engl 3851, 3852, 3853, 3860, 5815, 5831, 5843, 5851, 5862, or 5860

*Cluster of six elective courses chosen according to an area of academic interest or career plan:* Engl 1xxx or 3xxx or 5xxx (4 cr), Engl 3xxx or 5xxx (8 cr), and Engl 5xxx (12 cr). Clusters which have been developed, and are described in the *English Major Guidebook*, include American Literature; Women's Literature; Language/Linguistics; Poetry; Critical Theory; Drama; The Novel; Creative Writing. Others being developed include Folklore Studies; The Middle Ages; The Renaissance; other historical period studies; Post-Colonial Literature; Pre-Secondary Education. Students may propose their own coherent clusters, but the possibility for some clusters may be limited by the courses available.

*Seminar or writing workshop:* Engl 3960 (4 cr) or EngW 3960 (4 cr) or EngW 5xxx Advanced Writing Workshop (4 cr). See prerequisites and application procedures in the course descriptions.

*Senior Paper:* Engl 3961, Senior Paper (1 cr), registered concurrently with the seminar or writing workshop; or Engl 3961H, Honors Senior Paper (1 cr), registered concurrently with the seminar or writing workshop, and prerequisite *cum laude* or *magna cum laude* candidacy; or Engl 3963H, Honors Thesis (4 cr), prerequisite *summa cum laude* candidacy and permission of the English honors adviser. Guidelines are printed in *The English Major Guidebook*.

*Grades:* No courses may be taken S-N, with the exception of Engl 3961. Courses in which D grades are earned may not be applied toward the major.

*Independent Study:* Independent Study credits are limited to 16, at any number level, including Engl 3970, 3980, and 5970, and English or English Writing courses available through the University of Minnesota Extension Independent Study Bulletin.

*Department Resident Requirement:* Students must complete at least five courses (4 cr each) for the major (including Engl 3960 or EngW 3960) and the Senior Paper after admission to the major.

*Honors:* Students must apply for admission to the Honors Program (115 Johnston Hall) and talk with the English Director of Undergraduate Studies. English Honors requirements ask students to satisfy three honors requirements in English: 1) any one of the 3xxx-level honors sections offered by the department (3009H, 3241H, 3651H, 3671H, or others except 3963H); 2) an Honors Senior Paper—Engl 3961H (1 cr) or Engl 3963H (4 cr); 3) one of the following (some with printed criteria available

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

in the Undergraduate Studies Office): an honors directed studies project, an honors contract for a 3xxx or 5xxx English course, an 8xxx English course, a second English honors section, an honors course in another department as agreed upon by the English Honors adviser, or others as agreed upon.

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

**A Master of Arts in English can be completed in the evening.** See the degrees section of this Bulletin for further information.

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in English. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**ATTENDANCE**—Students absent from the first day of any Engl or EngW course may lose their place in the course unless they have contacted their instructor prior to the first class meeting.

### English language and literature courses (Engl)

(Creative writing and editing classes begin on page 194. See other literature courses in Afro-American and African Studies; American Studies; Classical Studies; Comparative Literature; French; General College; German; Humanities; Philosophy; Slavic Languages; Spanish; Compleat Scholar; and Women's Studies)

**Continuing Education for Women (CEW) sections available in the following courses:** Engl 1018, 3455, 3851

**Engl 1005 INTRODUCTION TO THE STUDY OF LITERATURE.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Understanding and enjoying literature. Readings of novels, short stories, poems, and plays. (No prereq. Limited to 40)

Fall Qtr, ★Sec 1, T, 6:20-8:50, LindH 217

Fall Qtr, ★Sec 2, W, 6:20-8:50, LindH 217

Winter Qtr, ★Sec 3, M, 6:20-8:50, LindH 305

Winter Qtr, ★Sec 4, Th, 6:20-8:50, LindH 229

Spring Qtr, ★Sec 5, M, 6:20-8:50, LindH 229

Spring Qtr, ★Sec 6, Th, 6:20-8:50, LindH 229

**Engl 1016 INTRODUCTION TO AMERICAN LITERATURE.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20. (IS)

Critical discussion of and writing about selected works of American literature. Typical authors: Poe, Hawthorne, Whitman, Dickinson, Twain, Frost, Fitzgerald. (No prereq. Limited to 40)

Fall Qtr, ★Sec 1, Th, 6:20-8:50, LindH 215

Spring Qtr, ★Sec 2, T, 6:20-8:50, LindH 217

**Engl 1018 INTRODUCTION TO MODERN FICTION.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Critical discussion of and writing about selected modern novels and stories. Works are selected each quarter from authors such as Atwood, Drabble, Cather, Ellison, Hemingway, Joyce, Kingston, Lawrence, Morrison, Murdoch, Silko, Woolf, and others. (No prereq. Limited to 40)

Fall Qtr, ★Sec 1, M, 1-3:30, MacP, Desai.

*Offered through Continuing Education for Women*

Winter Qtr, ★Sec 2, W, 6:20-8:50, LindH 229

Spring Qtr, ★Sec 3, Th, 6:20-8:50, LindH 203

**Engl 1241 INTRODUCTION TO SHAKESPEARE.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Survey of Shakespeare's work, treating approximately 10 plays. For students in all colleges of the University. (No prereq. Limited to 40)

Winter Qtr, ★Sec 1, M, 6:20-8:50, LindH 217

**Engl 1591 LITERATURE OF AMERICAN MINORITIES.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20. (IS)

Representative works by Afro-American, American Indian, Asian American, and Chicano/Chicana writers. Examination of relevant social factors. (No prereq. Limited to 40)

Fall Qtr, ★Sec 1, M, 6:20-8:50, LindH 217

Winter Qtr, ★Sec 2, Th, 6:20-8:50, Arch 30

Spring Qtr, ★Sec 3, M, 6:20-8:50, LindH 302

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**Engl 1595 INTRODUCTION TO "THIRD WORLD" LITERATURES IN ENGLISH.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20. (IS)

Overview of work produced in English outside the United States and Britain. Works represent different cultures, but treat concerns from common (post-) colonial legacy: politics of language, psychology of colonization, implication of colonial education, culture as resistance to domination. Typical artists include novelists Chinua Achebe (Nigeria), Tsitsi Dangarembga (Zimbabwe), Fadia Faqir (Palestine), Salman Rushdie (India), filmmaker Kidlat Tahimik (Philippines), and "dub" poets Mutabaruka and Jena Binta Breeze (Jamaica). (No prereq. Limited to 40)

Fall Qtr, ★Sec 1, W, 6:20-8:50, LindH 215

(See also CSch 0466, Cruising the Caribbean Through Native Eyes)

**Engl 1671 THE SHORT STORY.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Lecture introduction to short stories, with some emphasis on the history and diversity of the form. Typical authors: Poe, Chekhov, Lawrence, Joyce, Kafka, Welty, Faulkner. (No prereq. Limited to 40)

Spring Qtr, ★Sec 1, W, 6:20-8:50, LindH 215  
(See also CSch 0456, Southern Women Writers and the Short Story)

**Engl 3008 TECHNIQUES OF LITERARY STUDY.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60. (IS)

Training and practice in the analysis of various literary forms, with a special emphasis upon poetry. Use of argument, evidence and documentation in literary papers; introduction to major developments in contemporary criticism. *This is a required foundation course for all English B.A. majors and the minor in English.* (Prereq English major, minor, or premajor. Limited to 30)

Winter Qtr, ★Sec 1, M, 6:20-8:50, FordH 115, Ross

Spring Qtr, ★Sec 2, Th, 6:20-8:50, FordH 120, Brown

*Engl 3008 is also offered through Group Independent Study. For information, see page 499.*

**Engl 3009 MODERN LITERARY THEORY.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Problems of interpretation and criticism. Questions of meaning, form, authority, literary history, social significance. (Prereq English major or minor, 3008 and 16 cr literature or Δ. Limited to 40)

Winter Qtr, ★Sec 1, W, 6:20-8:50, LindH 302, Brown

*Engl 3111 is offered through Group Independent Study. For information, see page 499.*

**Engl 3115 THE MIDDLE AGES.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Major and representative works of the Middle Ages (650-1485). Typical readings: *Beowulf*, Chaucer, ballads, *Sir Gawain and the Green Knight*, *Everyman*. (No prereq. Limited to 40)

Fall Qtr, ★Sec 1, Th, 6:20-8:50, LindH 217, MacLeish

Winter Qtr, ★Sec 2, Th, 6:20-8:50, LindH 302, Savage

**Engl 3118 THE ROMANTIC AGE.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Major and representative works of the romantic period (1798-1832). Typical authors: Blake, Wordsworth, Coleridge, Byron, Shelley, Keats. (No prereq. Limited to 40)

Spring Qtr, ★Sec 1, M, 6:20-8:50, LindH 203, Fruman

**Engl 3241 SHAKESPEARE.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60. (IS)

Plays from Shakespeare's early and middle periods. All sections read *A Midsummer Night's Dream*, *Hamlet*, a history play, and three or four others. (No prereq. Limited to 30)

Fall Qtr, ★Sec 1, T, 6:20-8:50, LindH 302, Hurrell

Spring Qtr, ★Sec 2, W, 6:20-8:50, LindH 229, Durham

**Engl 3242 SHAKESPEARE.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60. (IS)

Plays from the middle and late periods. All sections read *King Lear*, *Macbeth*, *The Tempest*, and three or four other plays. (No prereq. Limited to 30)

Winter Qtr, ★Sec 1, Th, 6:20-8:50, LindH 215, Durham

Spring Qtr, ★Sec 2, T, 6:20-8:50, LindH 229, Geffen

**Engl 3413 SURVEY OF AMERICAN LITERATURE** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60. (IS)

Stephen Crane through World War II (1900-1945). (Prereq 46 or more credits. Limited to 40)

Spring Qtr, ★Sec 1, Th, 6:20-8:50, LindH 215, Solotaroff

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Engl 3455 AMERICAN SHORT STORY.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60. (IS)

Typical authors: Irving, Poe, Hawthorne, Twain, Crane, Cather, Faulkner, Welty, Bellow. (No prereq. Limited to 40)

Fall Qtr, ★Sec 1, W, 6:20-8:50, LindH 302, Furia

Spring Qtr, ★Sec 2, M, 1-3:30, MacP,

Meisenheimer. *Offered through Continuing Education for Women*

Spring Qtr, ★Sec 3, W, 6:20-8:50, LindH 217, Ross

**Engl 3671 THE NOVEL.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

The novel as a literary form. Readings of selected works of fiction from the 18th century to the present. (No prereq. Limited to 40)

Winter Qtr, ★Sec 1, W, 6:20-8:50, LindH 203, Geffen

**Engl 3851 THE ENGLISH LANGUAGE.** 4 credits, \$585.1, tuition\*: Resident \$344; Non-resident \$997.60. (IS)

Introduction to the English language including English grammars, phonetics and phonology, British and American dialects, and native-language acquisition. (No prereq. Limited to 60)

Fall Qtr, ★Sec 1, M, 6:20-8:50, LindH 203, Bridwell-Bowles

Winter Qtr, ★Sec 2, M, 1-3:30, MacP, Karstadt (Limit 45). *Offered through Continuing Education for Women*

Winter Qtr, ★Sec 3, M, 6:20-8:50, LindH 203, Anson

Spring Qtr, ★Sec 4, T, 6:20-8:50, LindH 203, Escure

(See also PSch 0720, Looking at Language: Fact and Fallacy; and REX 0703, The Origin of English Words)

**Engl 3853 WOMEN AND THE ENGLISH LANGUAGE.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

The connections between gender and the English language, including sexist language, feminist theories of language, and the language and style of women writers. (No prereq. Limited to 30)

Spring Qtr, ★Sec 1, M, 6:20-8:50, LindH 305, Bridwell-Bowles

**Engl 3854 TOPICS IN THE ENGLISH LANGUAGE: AMERICAN LITERACY AND CULTURAL DIVERSITY.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Links academic study with service learning through a unique arrangement with local community service

agencies. Students study a range of perspectives on the nature, acquisition, and present state of literacy in the U.S. with special focus on issues of culturally diverse and disadvantaged members of society. Topics include development of literacy as a function of culture; nature of dialect communities and relationship of dialects to American schooling; bilingualism and language policy (especially educational) in U.S.; language, gender, and the educational process; and the politics of language relative to the institution of education. Participants are required to tutor children at a local agency for a minimum of two hours a week and reflect on their experiences in logs and class discussion. Tutoring arrangements provided in class. (No prereq. Limited to 30)

Spring Qtr, ★Sec 1, M, 6:20-8:50, FordH 175, Anson

**Engl 3910 TOPICS IN ENGLISH AND NORTH AMERICAN LITERATURE: THE COMIC TRADITION IN BRITISH DRAMA.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Study of selected plays from the Renaissance to the late 20th century, tracing the tradition of comedy in British drama. Various forms of comedy will be discussed, from classical models to farce, comedy of manners, "laughing comedy," social comedy, and absurdism. Considerable attention given to the theory and techniques of comedy as a dramatic genre. Readings will include plays by Shakespeare, Jonson, Congreve, Goldsmith, Wilde, Shaw, and Stoppard. (No prereq. Limited to 30)

Winter Qtr, ★Sec 1, M, 6:20-8:50, FordH 60, Hurrell

**Engl 3920 TOPICS IN ANGLOPHONE LITERATURE: THE EMPIRE WRITES BACK.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Classic English texts together with rewritings of those texts which come from formerly colonized areas and challenge traditional construction of race and gender. Some like pairings include Conrad's *Heart of Darkness* with Chinua Achebe's *Things Fall Apart* (Nigeria); Defoe's *Robinson Crusoe* with J.M. Coetzee's *Foe* (South Africa); Charlotte Brontë's *Jane Eyre* with Jean Rhys's *Wide Sargasso Sea* (Jamaica) and selections from Jamaica Kincaid and Michelle Cliff; and Shakespeare's *The Tempest* with Aimé Césaire's *A Tempest* (Caribbean). (No prereq. Limited to 40)

Fall Qtr, ★Sec 1, W, 6:20-8:50, LindH 229, Sugnet

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

*Students must have English major status at the University of Minnesota Twin Cities campus before they can request a place in Engl 3960 or EngW 3960 Writing Workshop.*

**Engl 3960 JUNIOR-SENIOR SEMINAR:** WHAT IS A NOVEL? 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

What is a novel? William James memorably described it as a "loose, baggy monster" because it has no single definite shape, and Bakhtin came to much the same conclusion when he decided that the novel is a super-genre that includes all other genres. In this course, class participants will examine several representative British and American novels for the purpose of thinking about the definition of a novel. Specifically, Austen's *Emma*, Dickens's *Great Expectations*, and Warren's *All the King's Men* will be studied. Call (612) 625-4592 for a seminar request form. Priority is given to University of Minnesota-Twin Cities English majors. (Prereq English major status, completion of Comp 3011 or 3012 or 3013, jr or sr and written Δ. Limited to 15)

Winter Qtr, ★Sec 1, T, 6:20-8:50, LindH 229, Weinsheimer

**Engl 3961 SENIOR PAPER.** 1 credit, tuition\*: Resident \$86; Non-resident \$249.40.

Required of English majors, usually taken in the senior year. Critical analysis or research or creative writing paper usually in conjunction with Engl 3960 or EngW 3960. **Must be taken S-N.** Students should call the English department at (612) 625-4592 with questions. (Prereq English major, sr, concurrent or previous registration in Engl 3960 or EngW 3960, written Δ)

Fall Qtr, Sec 1, Arr  
Winter Qtr, Sec 2, Arr

**Engl 3961H HONORS SENIOR PAPER.** 1 credit, tuition\*: Resident \$86; Non-resident \$249.40.

Required of English majors, usually taken in the senior year. Critical analysis or research or creative writing paper usually in conjunction with Engl 3960 or EngW 3960. For English *cum laude* or *magna cum laude* degree candidates. **Must be taken S-N.** Students should call the English department at (612) 625-4592 with questions. (Prereq honors candidacy English major, sr, concurrent or previous registration in Engl 3960 or EngW 3960, and English honors adviser #)

Fall Qtr, Sec 1, Arr  
Winter Qtr, Sec 2, Arr

## Advanced Engl courses

*Prospective undergraduate English majors must apply for major status and be accepted before enrolling in 5000-level courses. These are advanced courses.*

**Engl 5151 18TH-CENTURY ENGLISH NOVEL.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Novels by such authors as Defoe, Richardson, Fielding, Smollett, Sterne, Austen. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 40)

Fall Qtr, ★Sec 1, T, 6:20-8:50, LindH 305, Weinsheimer

**Engl 5152 19TH-CENTURY ENGLISH NOVEL.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Novels 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. Limited to 40)

Winter Qtr, ★Sec 1, T, 6:20-8:50, LindH 215, Hirsch

**Engl 5175 MODERN DRAMA SINCE 1920.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40. (IS)

Chief dramatists, English, American, Continental. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 40)

Spring Qtr, ★Sec 1, W, 6:20-8:50, PeikH 165, Leyasmeyer

**Engl 5414 CONTEMPORARY AMERICAN LITERATURE.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Important authors, intellectual currents, movements, conventions, genres, and themes since 1940. (Prereq grad or Engl major or Δ. Qualified students may register for graduate credit at the University of Minnesota. Limited to 40)

Winter Qtr, ★Sec 1, M, 6:20-8:50, FordH 70, Solotaroff

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Engl 5432 AMERICAN POETRY.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40. (IS)

Major figures; historical and intellectual background; poetic theory: 1890-1940. Typical authors: Frost, Stevens, Pound, Moore, Hughes, Williams, Stein. (Prereq grad or Engl major or Δ. Qualified students may register for graduate credit at the University of Minnesota. Limited to 40)

Spring Qtr, ★Sec 1, M, 6:20-8:50, FordH 120, Furia

**Engl 5620 TOPICS: BRITISH AND AMERICAN WOMEN WRITERS: *Silence and Breaking Silence as a Feminist and Literary Tradition.*** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Works of women writers who are concerned with silence and the breaking of silence as a literary and/or feminist tradition. After defining a tradition of women's silence—which is present in English literature from the beginning—students consider the responses to the tradition in such women writers as Virginia Woolf, Adrienne Rich, Tillie Olsen, Audre Lorde, and Maxine Hong Kingston. Members of the class will also have opportunities to explore the silences in their own lives and writing. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Winter Qtr, ★Sec 1, TT, 4-5:15, LindH 217, Garner

**Engl 5711 CLASSICS OF LITERARY CRITICISM.** 4 credits, §3711, §CICv 3711, §CICv 5711, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Principles of criticism as expressed and employed in major works in the classic critical tradition, with emphasis on Aristotle and Coleridge. May include Plato, Horace, Longinus, Sidney, Dryden, Johnson, Hume, Eliot. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 40)

Fall Qtr, ★Sec 1, Th, 6:20-8:50, LindH 305, Fruman

**Engl 5910 TOPICS IN ENGLISH AND NORTH AMERICAN LITERATURE: HISTORY OF AMERICAN AND BRITISH CHILDREN'S LITERATURE.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

American children's literature has roots in the oral tradition and literary works from Great Britain, Germany, and other countries. Course surveys the books against the backdrop of historical and social events. In addition to using an anthology, each student reads a "classic" and writes a paper on a pre-20th-century author, illustrator, or topic. The Kerlan Collection houses facsimiles and editions of most "milestones" in children's literature, while the University libraries provide secondary sources. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to a combined total of 40)

Fall Qtr, ★Sec 1, M, 6:20-8:50, WaLib 109, Hoyle

**Engl 5910 TOPICS IN ENGLISH AND NORTH AMERICAN LITERATURE: OLD AGE IN MODERN FILM.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

A thematic study of how and why aging shapes the central focus of a selection of modern visual texts. Films include *On Golden Pond*, *Traveling North*, *The Whales of August*, *Grey Gardens*, *Wild Strawberries*, and *Providence*, supplemented by readings in Betty Friedan's *The Fountain of Age*. The subject is explored from philosophical, sociological, and psychological perspectives, and examines how contemporary narratives both presume and subvert stereotyped ideologies of aging. In addition to an increased appreciation of the varied representations of aging, the goal of the course is an enhanced understanding of how the experience of old age has as much to do with culture as with biology, and yet how it also has as much to do with the sometimes liberating possibilities of personal experience as with the often coercive expectancies of culture. In the words of one aged persona, it is hoped students will learn about some of the ways in which old people "can be destroyed but not defeated." (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 40)

Winter Qtr, ★Sec 2, Th, 6:20-8:50, LindH 217, Luke

Spring Qtr, ★Sec 3, Th, 6:20-8:50, LindH 302, Luke

\* Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



**Engl 5910 TOPICS IN ENGLISH AND NORTH AMERICAN LITERATURE: FOLKLORE IN LESBIAN LITERATURE: American and British Literature from the 1890s to the 1990s.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Readings will include basic assignments in folklore, folklore studies, "feminist" practice and theory (e.g., both academic and popular), and selections from the works of Jewett, Cather, Bishop, Barnes, Hall, Winterson, Morrison, LeGuin, Russ, Lorde, Anz Idua, cartoon strips, "pulp novels," and others. Covers both canonical and a representation of "marginal" writers and literary genres. Includes the current literary, academic, and popular folklore of and about lesbians. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 40)  
Winter Qtr, ★Sec 4, W, 6:20-8:50, LindH 305, Stekert

**Engl 5910 TOPICS IN ENGLISH AND NORTH AMERICAN LITERATURE: LIVELY IMAGINATION: Ethics and Aspects of Moral Thinking.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

A consideration of first-rate poems, stories, essays. The effects of telling, hearing, and interpreting stories; empathy with respect to stories and stage development theory. Creative writing involved. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with LS 5910. Limited to a combined total of 30)

Spring Qtr, ★Sec 5, Th, 6:20-8:50, LindH 217, Bly

**Engl 5920 TOPICS IN ANGLOPHONE LITERATURE: LITERATURE OF SOUTH AFRICA AND ZIMBABWE.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Effects of apartheid society on the production of black and white literature in modern South Africa, and examines the culture of the "New South Africa." Effects of the Zimbabwean Revolution on Zimbabwean literature in English. Readings will include such writers as Nadine Gordimer, Alex LaGuma, J.M. Coetzee, Tsitsi Dangarembga, and Dambudzo Marachera. (Prereq grad student or English undergrad major or Δ. Qualified students may

register for graduate credit at the University of Minnesota. Limited to a combined total of 40)  
Spring Qtr, ★Sec 1, T, 6:20-8:50, LindH 305, Sugnet

**Engl 8050 STUDIES IN SPECIAL SUBJECTS: AMERICAN LITERATURE, HISTORY, AND CULTURE.** 4 credits, tuition\*: Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Case study approach to questions of theory and method. Through investigation of three cases in which the student of American culture finds literature, history, and culture intertwined, participants will try to discover in a practical way the issues facing a practitioner of interdisciplinary research and criticism. In the process, they will engage in some of the abstract, theoretical issues in literary criticism, historiography, and contemporary criticism of culture. The seminar is organized to operate from the particular to the general, the practice to the theory, rather than the other way around. These cases are specimens, deliberately limited in scope to require hard thinking about the issues. (No prereq. Open only to students admitted to the University of Minnesota Graduate School. A joint Day/Extension class limited to 6 Extension students)

Fall Qtr, ★Sec 1, T, 3:15-5:30, LindH 303, Griffin

**Engl 8050 STUDIES IN SPECIAL SUBJECTS: CONTEMPORARY AMERICAN NOVEL.** 4 credits, tuition\*: Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Students will read six or seven novels written by Americans in the last 15 years as the major part of inquiry into some of the most important novelistic achievements of this period. As a way of offering some common ground to the inquiries, the majority of the novels read and discussed try to take on, in a fairly explicit way, what it is like to live in the United States of 1980-95. Some of the selections will be relatively representational novels such as Robert Stone's *Outerbridge Reach*, Charles Baxter's *Shadow Play*, Russell Bank's *Continental Drift*, and Gloria Naylor's *Linden Hills*. Others will be more experimental, like Thomas Pynchon's *Vineland*, Don DeLillo's *White Noise*, and William Gibson's *Mona Lisa Overdrive*. Students will choose at least one of the texts; they also will read some critical essays as a way of providing theoretical ballast for the novels. Students will write two 4- to 6-page papers and take a final exam. (No prereq. Open only to students admitted to the University of Minnesota Graduate School. A joint Day/Extension class limited to 6 Extension students)

Spring Qtr, ★Sec 2, T, 6:20-8:35, LindH 215, Solotaroff

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Engl 8610 SEMINAR: STUDIES IN 20TH-CENTURY BRITISH AND AMERICAN LITERATURE: Origins of Poetic Modernism.** 4 credits, tuition\*: Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Readings of a variety of British and American modernist and pre-modernist poets such as Brooke, Huxley, Lawrence, Eliot, HD, Pound, Cummings, and Stein in the contexts of their reception of contemporaneous poetic/aesthetic theory and French Symbolist poetry (especially Baudelaire, Mallarmé, and Laforgue). Particular focal points for discussion will be the development and presentation of the *self* as well as the use of fragmentary narrative. Non-Anglophone texts will be read in translation. (No prereq. Open only to students admitted to the University of Minnesota Graduate School. A joint Day/Extension class limited to 4 Extension students)

Winter Qtr, ★●Sec 1, Th, 6:20-8:35, LindH 202, Firchow

**Engl 8670 STUDIES IN PROSE FICTION: AMERICAN AND INTERNATIONAL FICTION.** 4 credits, tuition\*: Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Contemporary American and international fiction in various forms: the short-short story, the novella, the segmented novel, and the more traditional long narrative. An exploration of strategies in published work to help students learn about their own artistic choices. (No prereq. Open only to students admitted to the University of Minnesota Graduate School. A joint Day/Extension class limited to 5 Extension students)

Winter Qtr, ★●Sec 1, M, 4-7, LindH 302, Miner

### Creative writing (EngW)

(See also *Writing and Literature* in Compleat Scholar noncredit section)

The program in Creative Writing is part of the Department of English and is partially supported by funds from the Edelstein-Keller Endowment for Creative Writing. The program offers courses that fulfill requirements for the M.A. and M.F.A. degrees with an emphasis on creative writing; courses at the undergraduate level are available as well, and advanced undergraduates and other interested students may also apply for admission to the graduate-level courses (see the instructions that appear before the listing of 5000-level courses).

**Visiting Writers**—Visiting writers funded by the Edelstein-Keller endowment may be in residence for varying periods during the year. You may obtain details of these visits from the program office, 209 Lind Hall; (612) 625-6366.

**EngW 1101 INTRODUCTION TO CREATIVE WRITING.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Through a combination of small writers' groups and presentations by visiting writers, this course will help students begin writing poetry and prose. For those who want to try creative writing, improve their reading skills, and learn more about the creative process. This writers' workshop will meet once a week in the evening, but it will be related to presentations given by guest writers in the day school course EngW 1101, and students must be able to attend daytime sessions of that course (Fall Tuesdays and Spring Thursdays, 2:30-3:45). (No prereq. Limited to 25)

Fall Qtr, ★Sec 1, Th, 6:20-8:15, Phys 157

Fall Qtr, ★Sec 2, Th, 6:20-8:15, LindH 229

Fall Qtr, ★Sec 3, Th, 6:20-8:15, AkerH 309

Spring Qtr, ★Sec 4, T, 6:20-8:15, LindH 302

Spring Qtr, ★Sec 5, W, 6:20-8:15, FordH 40

Spring Qtr, ★Sec 6, W, 6:20-8:15, LindH 340

(See also CSch 0400, Creative Writing)

**EngW 1102 INTRODUCTION TO FICTION WRITING.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20. (IS)

Beginning instruction in the art of fiction: characterization, plot, dialogue, and style. Writing exercises to help students generate ideas. Students will read and discuss published fiction as well as their own writing. (Prereq EngW 1101. Limited to 25)

Fall Qtr, ★Sec 1, M, 6:20-8:50, LindH 229

Winter Qtr, ★Sec 2, W, 6:20-8:50, LindH 215

Spring Qtr, ★Sec 3, W, 6:20-8:50, LindH 203

(See also CSch 0406, Reading and Writing Successful Short Fiction)

**EngW 1103 INTRODUCTION TO POETRY WRITING.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20. (IS)

Beginning instruction in the art of poetry. Discussion of student poems and contemporary poetry, ideas for generating material, and writing exercises both in and out of class. (Prereq EngW 1101. Limited to 25)

Winter Qtr, ★Sec 1, T, 6:20-8:50, LindH 203, Browne

Spring Qtr, ★Sec 2, Th, 6:20-8:50, FordH 40

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**EngW 3102 INTERMEDIATE FICTION WRITING.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60. (IS)

For students with experience in writing fiction. Exercises, experiments, assigned readings, and discussion of students' work. (Prereq EngW 1102 or equivalent. Limited to 20)

Fall Qtr, ★Sec 1, T, 6:20-8:50, FordH 160

Spring Qtr, ★Sec 2, T, 6:20-8:50, MurH 311

(See also CSch 0415, Writing Fantasy and Science Fiction for Publication)

**EngW 3103 INTERMEDIATE POETRY WRITING.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60. (IS)

A workshop for students with experience in writing poetry. Exercises, experiments, assigned readings, and discussion of students' work. (Prereq 1103 or equivalent. Limited to 20)

Fall Qtr, ★Sec 1, T, 6:20-8:50, MurH 311,

Browne

Winter Qtr, ★Sec 2, Th, 6:20-8:50, LindH 305

(See also CSch 0450, Poetry as Process, Practice, and Promise)

**EngW 3110 TOPICS IN CREATIVE WRITING: INTRODUCTION TO PLAYWRITING/SCREENWRITING.** 4 credits, §Th 3115, tuition\*: Resident \$344; Non-resident \$997.60.

Techniques of playwriting/screenwriting, completion of original one-act play/screenplay. (Prereq EngW 1101 or equivalent. Meets concurrently with Th 3115, sec 1. Limited to a combined total of 20)

Fall Qtr, ★Sec 1, T, 6:20-8:50, RarigC 616

(See also CSch 0433, Introduction to Screenwriting)

**EngW 3110 TOPICS IN CREATIVE WRITING: INTERMEDIATE CREATIVE NONFICTION.** 4 credits, §Th 3115, tuition\*: Resident \$344; Non-resident \$997.60.

Continuing instruction in the art of literary nonfiction, including the memoir. Discussion of student work and contemporary creative nonfiction. (Prereq EngW 1101 or 1102 or 1103 or 1104. Limited to 20)

Winter Qtr, ★Sec 2, W, 6:20-8:50, MurH 311

**Courses Requiring Department's Permission**

**Note**—Admission to courses that require permission to register (Δ) can be obtained only from the Creative Writing office. Students interested in these courses must submit an application form, a letter of introduction to the instructor, and (in most cases) a manuscript of about 10 pages, preferably in the genre of the course for which they are applying, to

the Creative Writing office, 209 Lind Hall. Applications for fall classes must be submitted by Fri., Aug. 25, 1995; applications for winter classes by Fri., Nov. 10, 1995; and applications for spring classes by Fri., Feb. 16, 1996. Copies of the application form are available in the program office. *If you register without permission from the program office, you will forfeit your place in the class.* If you have questions or would like more information, please call the office at 625-6366. Full course descriptions are available in the Creative Writing office on a quarterly basis.

**EngW 5101, 5102, 5103 ADVANCED FICTION WRITING.** 4 credits each quarter, tuition\* each quarter: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Advanced workshop for students with considerable experience in writing fiction. *5102*: Advanced fiction workshop designed for highly motivated students with considerable experience in fiction writing. Students write in various forms and address craft issues. Workshop involves writing fiction and reading published books and the work of class participants. (Prereq written Δ. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Fall Qtr, 5101, ★○Sec 1, M, 4:15-6:45, FordH 40, Fitzgerald

Winter Qtr, 5102, ★○Sec 1, W, 4-7, LindH 217, Miner

Spring Qtr, 5103, ★○Sec 1, T, 4:15-6:45, LindH 216

**EngW 5105, 5106 ADVANCED POETRY WRITING.** 4 credits each quarter, tuition\* each quarter: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Advanced workshop for students with considerable experience in writing poetry. The workshop gives students an opportunity to explore new poetic possibilities and to read widely in contemporary poetry and poetics. (Prereq written Δ. Qualified students may register for graduate credit at the University of Minnesota. Limited to 15)

Fall Qtr, 5105, ★○Sec 1, M, 4:15-6:45, LindH 215, Browne (A joint Day/Extension class limited to 5 Extension students)

Winter Qtr, 5106, ★Sec 1, Th, 4:15-6:45, LindH 203

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**EngW 5120 TOPICS IN ADVANCED POETRY WRITING: POETRY IN TRANSLATION—POETS OF EASTERN EUROPE.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Contact the Creative Writing Program for course description: 625-6366, 209 Lind Hall. (Prereq written  $\Delta$ . Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Fall Qtr, ★●Sec 1, Th, 4:15-6:45, LindH 216, Browne

**EngW 5130 TOPICS IN ADVANCED CREATIVE WRITING: ADVANCED NONFICTION.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Advanced workshop in nonfiction. Contact the Creative Writing Program for course description: 625-6366, 209 Lind Hall. (Prereq written  $\Delta$ . Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Spring Qtr, ★●Sec 1, T, 4:15-6:45, LindH 320

**EngW 5204 ADVANCED PLAYWRITING/SCREENWRITING.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Advanced playwriting/screenwriting workshop for students with experience in creative writing and an interest in writing for stage or screen. Step-by-step creation of a short script. Field trips to local productions. Students may wish to take 5310 sec 1 fall quarter. (Prereq written  $\Delta$ . Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with Th 5115. A joint Day/Extension class limited to a combined total of 6 Extension students)

Winter Qtr, ★●Sec 1, W, 4:15-6:45, BlegH 205

**EngW 5210 TOPICS IN ADVANCED NONFICTION WRITING: LITERARY NONFICTION.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Special topics in nonfiction writing. *This offering:* A workshop for experienced writers. Readings in literary nonfiction by writers such as Susan Griffin, Roland Barthes, Tom Wolfe, and Eduardo Galeano will help individual students with their creative literary nonfiction projects. Some exercises and short assignments in addition to the longer project. This is *not* a course in "the essay." (Prereq written  $\Delta$ . Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Fall Qtr, ★●Sec 1, T, 4:15-6:45, LindH 315, Sugnet

**EngW 5210 TOPICS IN ADVANCED NONFICTION WRITING.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Special topics in nonfiction writing. Contact the Creative Writing Program for course description: 625-6366, 209 Lind Hall. (Prereq written  $\Delta$ . Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Spring Qtr, ★●Sec 2, M, 4:15-6:45, LindH 325, Hampl

**EngW 5310 READING AS WRITERS: MEMOIR.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Special topics such as reading the memoir or short story. Contact the Creative Writing Program for course description: 625-6366, 209 Lind Hall. (Prereq written  $\Delta$ . Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Fall Qtr, ★●Sec 1, M, 4:15-6:45, LindH 216, Hampl

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**EngW 5310 READING AS WRITERS: CONTEMPORARY DRAMATIC LITERATURE.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Wide reading of such authors as Sam Shepard, David Mamet, August Wilson, Caryl Churchill, Harold Pinter, Tom Stoppard, Athol Fugard, Peter Handke, Václav Havel, and Mbongeni Ngema. Attendance at some local performances will be required. Written responses and imitative exercises assigned. (Prereq written  $\Delta$ . Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with Th 5950. Limited to 7)

Fall Qtr, ★Sec 2, W, 4:15-6:45, LindH 203

**EngW 5310 READING AS WRITERS: WRITING OFF THE MAINSTREAM.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

An exploration of fictions that do not take the exploration of character and relationships as their main focus, but stem from a variety of other concerns: Borges, Kafka, Beckett, and Calvino are among the writers whose work is discussed. Depending on the composition of the class, there will be either discussion of the students' work or assignments, or both. (Prereq written  $\Delta$ . Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Spring Qtr, ★Sec 3, T, 4:15-6:45, LindH 340, Fitzgerald

**EngW 5310 READING AS WRITERS: WRITING FROM LIFE—VARIETIES OF NONFICTION PROSE.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Focuses on nonfiction writing, with some attention given to fictionalized autobiography. Students examine the ways in which authors select from and use their experience in order to make sense of the world. They will also be concerned with the specifically literary aspects of the works in question: how they organize and present the subject matter of individual history and engagement in a way that elicits response from the reader. Throughout, class members will be asking how the author creates a self or a voice that gives shape to his or her experience.

Writing assignments will be designed to assist students in defining their own compelling subject matter for nonfiction writing as well as the means for articulating it. Authors to be examined include Vivian Gornick, Marguerite Duras, Spalding Gray, Annie Dillard, Gretel Erlich, John McPhee, Salman Rushdie, Jamaica Kincaid, Susan Kenney, and others. (Prereq written  $\Delta$ . Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Spring Qtr, ★Sec 4, Th, 4:15-6:45, LindH 320, Sprengnether

**EngW 5320 READING (AND VIEWING) AS WRITERS: POETRY AND FILM.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Moves among two forms of poetry—cinemoems created by American avant-garde filmmakers (such as Maya Deren, Marie Mencken, Chick Strand, James Benning, James Broughton, Kenneth Anger, Stan Brakhage) and poems using the written word (again the emphasis will be on 20th-century American poets). Readings include some of the critical interpretations/descriptions of and by the artists. Focus is on the translation process between imagery and sound as purely sensuous processes and the formal structures of framing, editing, and point of view in both filmic and written languages. Students engage in a variety of written (or perhaps visual) responses to the material. (Prereq written  $\Delta$ . Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Spring Qtr, ★Sec 1, W, 4:15-6:45, LindH 216, Rabinowitz

**EngW 5401 INTRODUCTION TO PROFESSIONAL EDITING.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40. (IS)

Beginning editing, from substantive editing to the nature of the editor-writer relationship: manuscript reading, author queries, rewrite and style, some discussion of copy editing. Students develop editing awareness and skills by working on varied writing samples. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25)

Fall Qtr, ★Sec 1, T, 6:20-8:50, LindH 215

Winter Qtr, ★Sec 2, Th, 6:20-8:50, MurH 311

Spring Qtr, ★Sec 3, T, 4:15-6:45, FordH 349

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**EngW 5402 ADVANCED PROFESSIONAL EDITING.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Opportunity for students with basic editing competence to advance their skills. Workshop/seminar setting provides experience in editing a long text and exposure to other specific types of editing such as fiction, children's literature, translations, indexing; discussion and guest lectures on areas of book publishing such as libel and contracts, small press; practice in editing one's own writing. (Prereq EngW 5401 and written  $\Delta$ . Qualified students may register for graduate credit at the University of Minnesota. Limited to 18)

Spring Qtr, ★ $\odot$ Sec 1, Th, 6:20-8:50, LindH 216

**EngW 8101 READING ACROSS GENRES.** 4 credit, tuition\*: Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Contact the Creative Writing Program for course description: 625-6366, 209 Lind Hall. (Prereq MFA candidate or  $\Delta$ . Open only to students admitted to the University of Minnesota Graduate School. A joint Day/Extension class limited to 5 Extension students)

Fall Qtr, ★ $\odot$ Sec 1, T, 4:15-6:45, LindH 216, Fitzgerald

**EngW 8110 WRITING OF FICTION SEMINAR.** 4 credits, tuition\*: Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40

Contact the Creative Writing Program for course description: 625-6366, 209 Lind Hall. (Prereq written  $\Delta$ . Open only to students admitted to the University of Minnesota Graduate School. A joint Day/Extension class limited to 5 Extension students)

Spring Qtr, ★ $\odot$ Sec 1, M, 4:15-6:45, LindH 340, Fitzgerald

**EngW 8120 WRITING OF POETRY: POETS WRITING POETRY AND PROSE.** 4 credits, tuition\*: Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Contact the Creative Writing Program for course description: 625-6366, 209 Lind Hall. (Prereq written  $\Delta$ . Open only to students admitted to the University of Minnesota Graduate School. A joint Day/Extension class limited to 5 Extension students)

Spring Qtr, ★ $\odot$ Sec 1, M, 4:15-6:45, LindH 216, Browne

**EngW 8140 FICTION: MANUSCRIPT PREPARATION.** 4-8 credits, tuition\* each credit: Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Facilitates the work of graduate students writing their M.A. and M.F.A. creative projects. (Prereq MFA candidate or written  $\Delta$ . Open only to students admitted to the University of Minnesota Graduate School. A joint Day/Extension class limited to 5 Extension students)

Fall Qtr, ★ $\odot$ Sec 1, W, 4:15-6:45, LindH 340, Miner

**EngW 8150 POETRY: MANUSCRIPT PREPARATION.** 4-8 credits, tuition\* each credit: Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Contact the Creative Writing Program for course description: 625-6366, 209 Lind Hall. (Prereq MFA candidate or written  $\Delta$ . Open only to students admitted to the University of Minnesota Graduate School. A joint Day/Extension class limited to 5 Extension students)

Winter Qtr, ★ $\odot$ Sec 1, Th, 4:15-6:45, LindH 216, Browne

**EngW 8160 CREATIVE WRITING: MANUSCRIPT PREPARATION.** 4-8 credits, tuition\* each credit: Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Contact the Creative Writing Program for course description: 625-6366, 209 Lind Hall. (Prereq MFA candidate or written  $\Delta$ . Open only to students admitted to the University of Minnesota Graduate School. A joint Day/Extension class limited to 5 Extension students)

Spring Qtr, ★ $\odot$ Sec 1, T, 4:15-6:45, LindH 325, Hamp

**EngW 8990 CREATIVE PROJECT.** 1-16 credits, tuition\* each credit: Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

(Prereq written #. Open only to MFA candidates in Creative Writing admitted to the University of Minnesota Graduate School. A joint Day/Extension class limited to 5 Extension students)

Fall Qtr, ★ $\odot$ Sec 1, Arr

Winter Qtr, ★ $\odot$ Sec 2, Arr

Spring Qtr, ★ $\odot$ Sec 3, Arr

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## English as a Second Language (ESL)

(102 Klaeber Court: 624-1503)

### College of Liberal Arts

Textbooks for most ESL courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

**Note:** Students registering for ESL courses must contact the Minnesota English Center (MEC), at least one week before classes begin, at 624-1503 for testing and placement information. *Individuals are required to complete one of the following tests:* Minnesota Battery of English Language Proficiency (MNBatt), Test of English as a Foreign Language (TOEFL), English Placement Test (EPT), or Michigan English Language Assessment Battery (MELAB). Arrangements for EPT and the MNBatt can be made at MEC up to one week prior to enrollment. Information for TOEFL and MELAB is available at MEC, and registration must be completed several weeks prior to enrollment. *When registering for classes, your test score/placement forms must be attached to your registration form.*

**ESL 0314-0315 FUNDAMENTALS IN ENGLISH AS A SECOND LANGUAGE.** No credit, \$402.50 (includes \$5 course fee).

A low-intermediate course designed to give non-native speakers the basic knowledge and skills needed for daily communication in spoken English; grammatical structures are explained with reference to their uses in social situations; instruction is also provided in pronunciation. **Must be taken S-N.** (Prereq a satisfactory score on MBatt or TOEFL and written permission. Limited to 20)

Fall Qtr, 0314, ★Sec 1, TTh, 6:20-8:50, CivE 213

Winter Qtr, 0315, ★Sec 1, TTh, 6:20-8:50, KoltH 138

**ESL 0321 UPPER INTERMEDIATE GRAMMAR.** No credit, \$402.50 (includes \$5 course fee). (IS)

An upper intermediate course that reviews and adds to repertoire of structures with attention to meaning, use, and form; emphasizes verb phrase and control of grammar in writing. **Must be taken S-N.** (Prereq a satisfactory score on the MBatt or TOEFL and written permission. Limited to 20)

Spring Qtr, ★Sec 1, TTh, 6:20-8:50, KoltH 139

**ESL 0324-0325-0326 DEVELOPING FLUENCY IN ENGLISH AS A SECOND LANGUAGE.** No credit, \$402.50 (includes \$5 course fee).

An advanced course for non-native speakers who want to improve their communication skills for social, academic, and professional purposes; emphasis is placed on listening and speaking; content is drawn from the mass media. **Must be taken S-N.** (Prereq a satisfactory score on the MBatt or TOEFL and written permission. Limited to 20)

Fall Qtr, 0324, ★Sec 1, TTh, 6:20-8:50, KoltH S134

Winter Qtr, 0325, ★Sec 1, TTh, 6:20-8:50, KoltH S139

Spring Qtr, 0326, ★Sec 1, TTh, 6:20-8:50, KoltH S138

**ESL 0343 ADVANCED ACADEMIC WRITING.** No credit, \$402.50 (includes \$5 course fee).

An advanced writing course for graduate students who are non-native speakers of English; introduction to the use of the library system and to types of writing required in graduate school courses; designed to improve skills in developing and organizing ideas, drafting, revising and editing papers, writing essay exams. **Must be taken S-N.** (Prereq a satisfactory score on MBatt or TOEFL and written permission. Limited to 20)

Fall Qtr, ★Sec 1, MW, 4:20-5:15, KoltH 134

**ESL 0351 INTERNATIONAL BUSINESS ENGLISH.** No credit, \$402.50 (includes \$5 course fee).

Focuses on English as it is used in business. Students work on reading, listening, speaking, and writing activities based on business topics. **Must be taken S-N.** (Prereq a satisfactory score on MBatt or TOEFL and written permission. Limited to 20)

Fall Qtr, ★Sec 1, MW, 6:20-8:50, CivE 213

**ESL 0352 ENGLISH FOR SCIENCE AND TECHNOLOGY.** No credit, \$402.50 (includes \$5 course fee).

Focuses on English as it is used in scientific fields, emphasizing the language involved in formulating hypotheses, describing experiments, and presenting results. Includes reading, writing, listening, and speaking activities based on scientific and technical English. **Must be taken S-N.** (Prereq a satisfactory score on MBatt or TOEFL and written permission. Limited to 20)

Winter Qtr, ★Sec 1, MW, 6:20-8:50, CivE 213

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

### Entomology (Ent)

(219 Hodson Hall: 624-3636)

#### College of Agricultural, Food, and Environmental Sciences

Textbooks for most Ent courses are available at University of Minnesota Bookstore—St. Paul (624-9200).

Catherine C. Reed, Lecturer

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Entomology. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**Ent 5920 SPECIAL LECTURES: USING INSECTS IN THE CLASSROOM.** 2 credits, tuition\*: Resident \$187; Non-resident \$542.30; Resident Graduate credit \$236; Non-resident Graduate credit \$519.20; Resident Graduate School credit \$431; Non-resident Graduate School credit \$948.20. Insect-related activities for the elementary classroom; use of insects in teaching and learning science skills; techniques for observing and maintaining insects in schools. *Text available at first class meeting.* (Prereq 1 course in general biology. Qualified students may register for graduate credit at the University of Minnesota. Limited to 24) Spring Qtr, ★Sec 1, T, 4:30-6:30, HodsonH 480, StP Campus. Reed

### Family Education

See Vocational and Technical Education

### Family Practice and Community Health (FPCH)

(6-240 Phillips-Wangensteen: 624-2622)

#### Medical School

Textbooks for most FPCH courses are available at University of Minnesota Bookstore—Health Sciences (625-8600).

Edmond (Eli) Coleman, Associate Professor

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Family Practice and Community Health. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**FPCH 5950 CLINICAL ISSUES IN HUMAN SEXUALITY.** 3 credits. Offered alternate years. Scheduled for spring 1997.

*For information about related courses, call the Program in Human Sexuality, 625-1500.*

### Family Social Science (FSoS)

(290 McNeal Hall: 625-1900)

#### College of Human Ecology

Textbooks for most FSoS courses are available at University of Minnesota Bookstore—St. Paul (624-9200).

(See also Anth 5920, Topics in Anthropology: Anthropology of AIDS; PubH 5010, Public Health Approach to AIDS; College of Human Ecology; General College; and Compleat and Practical Scholar noncredit courses)

Linda Budd, Adjunct Assistant Professor in Family Social Science  
Daniel Detzner, Associate Professor  
William J. Goodman, Adjunct Assistant Professor, Family Social Science  
James Maddock, Associate Professor  
David Olson, Professor  
Pearl Rosenberg, Professor Emeritus, Medical School  
Marilyn M. Rossmann, Associate Professor, Vocational Technical Education  
Robert E. Yahnke, Associate Professor, General College

**Alcohol and Drug Counseling Program listing begins page 202.**

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Family Social Science. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



**FSoS 1001 INTRODUCTION TO FAMILY RELATIONSHIPS.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

General exploration of partner selection, interaction in committed relationships, parenting, gender roles, and the impact of social issues on family relationships. (No prereq)

Fall Qtr, Sec 1, M, 5:30-8:50, FordH 285  
 Fall Qtr, **○**Sec 2, T, 5:30-8:50, McNH 198, StP Campus (A joint Day/Extension class)  
 Winter Qtr, **○**Sec 3, T, 5:30-8:50, McNH 198, StP Campus (A joint Day/Extension class)  
 Spring Qtr, Sec 4, T, 5:30-8:50, McNH 198, StP Campus

(See also CSch 0308, Families)

**FSoS 1025 PARENTHOOD.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Differing concepts of family roles—father, mother, son, daughter, sister, brother. Parent-child and sibling interaction. Effects of parenthood on husband-wife relations. (No prereq)

Spring Qtr, Sec 1, W, 5:30-8:50, ClaOff B30, StP Campus

**FSoS 3600 FAMILY ISSUES ACROSS THE LIFESPAN.** 5 credits, tuition\*: Resident \$430; Non-resident \$1247.

Major family theories serve as frameworks to analyze issues confronting families throughout the life span and to explore connections between family and society. **Must be taken A-F.** (Prereq intro course in psy, soc)

Spring Qtr, Sec 1, MW, 4-6:10, BioSci 12, StP Campus

**FSoS 5001 HUMAN SEXUAL BEHAVIOR.** 5 credits, tuition\*: Resident \$430; Non-resident \$1247; Resident Graduate credit \$590; Non-resident Graduate credit \$1298; Resident Graduate School credit \$1077.50; Non-resident Graduate School credit \$2370.50. (IS)

Multidisciplinary approach to sexual development through individual/family life cycles, emphasizing scientific knowledge to promote sexual health through individual, family, and community services; ethics and values issues. (Prereq 90 cr, 3600 or grad student in social or behavioral or educational or health science or human service program

or #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with HSU 5027)

Fall Qtr, Sec 1, Th, 5:30-9:40, BorH 335, StP Campus  
 Spring Qtr, Sec 2, Th, 4-8:20, McNH 33, StP Campus

**FSoS 5025 PARENTING.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

This course examines a number of parenting models while concurrently focusing on the child's development from infancy through adolescence. Students are trained to identify differing parenting techniques and to develop their own parenting approach. (Prereq 5200 or 5202, CPsy 1301. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr, Sec 1, M, 4-7:35, McNH 197, StP Campus, Rossmann  
 Winter Qtr, **○**Sec 2, M, 4:30-8:05, McNH 197, StP Campus, Budd (A joint Day/Extension class)

**FSoS 5200 FAMILY SYSTEMS.** 5 credits, tuition\*: Resident \$430; Non-resident \$1247; Resident Graduate credit \$590; Non-resident Graduate credit \$1298; Resident Graduate School credit \$1077.50; Non-resident Graduate School credit \$2370.50. (IS)

Advanced survey of current developments in Family Social Science emphasizing families as complex systems of interpersonal relationships that also interact with larger social systems. (Prereq Psy 1001 or equivalent, Soc 1001 or equivalent. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, **○**Sec 1, W, 5:30-9:40, McNH 33, StP Campus, Olson  
 Winter Qtr, **○**Sec 2, Th, 5:30-9:40, ClaOff B42, StP Campus

(See also REX 0502, Relationships in Adoptive Families)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**FSoS 5240 SPECIAL TOPICS: EDUCATION FOR HEALTHY SEXUALITY.** 4 credits, \$FE 5411, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

A comprehensive approach to preparing teachers to develop, deliver, and evaluate educational programs oriented toward positive expression of individual and family sexuality. Focus will be on creating strategies to assist children, youth, and adults to acquire information, form positive attitudes and values, develop interpersonal skills, and exercise responsibility in all aspects of their sexual lives. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with FE 5411. A joint Day/Extension class limited to a combined total of 10 Extension students)

Spring Qtr, ★●Sec 1, M, 4-7, McNH 376, StP Campus, Maddock, Rossmann

**FSoS 5251 AGING FAMILIES.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Aging families as complex developing systems interacting with changing social structure. Marital relationships, role changes, and family care-giving issues. (Prereq 3600 or 5200 or SW 5024 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr, ●Sec 1, T, 4-7:35, McNH 197, StP Campus, Detzner

**FSoS 5253 HUMANITIES, AGING, AND FAMILY LIVING.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

An overview of the humanities (novels, short fiction, nonfiction, poetry, educational films) as they relate to the study of aging and family living. Emphasizes the *experience* of aging as it is perceived from the *older person's point of view*, especially as it relates to the experience of family living. Students are encouraged to consider their attitudes toward their own aging and to analyze the significance of their relationships with older persons. (Prereq 5200 or SW 5024 or equivalent. Qualified

students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr, ●Sec 1, Th, 4-7:35, McNH 198, StP Campus, Yahnke

**FSoS 5500 RACIAL AND ETHNIC DIVERSITY IN FAMILIES.** 4 credits. **Not offered 1995-96. (IS)**

Overview of family issues of various American racial and ethnic populations. Combines a study of research and case studies with individual projects to develop and enrich understanding of cultural diversity. (Prereq 5200. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

### Alcohol and drug counseling education program (ADCEP)

(388 McNeal Hall: [612] 625-3778; FAX: [612] 625-4227)

Textbooks for most ADCEP courses are available at University of Minnesota Bookstore—St. Paul (624-9200).

Diana Chamblee, Teaching Specialist, Alcohol and Drug Counseling Education Program  
Philip L. Colgan, Director, Alcohol and Drug Counseling Education Program  
Constance Fabunmi, Instructor, Alcohol and Drug Counseling Education Program  
William J. Goodman, Adjunct Assistant Professor, Family Social Science  
Susan Hoffman, Teaching Specialist, Alcohol and Drug Counseling Education Program  
Winifred Lilly-Taylor, Teaching Specialist, Alcohol and Drug Counseling Education Program  
Cynthia Meyer, Teaching Specialist, Alcohol and Drug Counseling Education Program  
Jim Robinson, Teaching Specialist, Alcohol and Drug Counseling Education Program

**Your attention is also called to the Alcohol and Drug Counseling Education Certificate, page 523.**

*To obtain a formal application for the certificate program, write to the Alcohol and Drug Counseling Education Program, University of Minnesota, Family Social Science, 388 McNeal Hall, 1985 Buford Ave., St. Paul, MN 55108. Or call the program office at (612) 625-3778.*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

For admission to the certificate program, a personal screening interview is required. In this instance, a nonrefundable \$25 screening interview fee will be assessed prior to the start of the interview process. A final evaluation is conducted for all certificate candidates upon completion of all program requirements. A nonrefundable \$25 final evaluation fee is required at the time of the final evaluation session.

*Call 625-3778 for room assignments if room is not listed below.*

*You must attend the entire first class session or your space in that class will be forfeited.*

**FSoS 3026 ASSESSMENT OF ALCOHOL AND DRUG USE PROBLEMS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Series of lectures and discussions with emphasis on theoretical views of the nature of dependency and drug use problems and approaches to diagnosis and assessment. *Students working toward the certificate must take this course A-F.* (No prereq. Students interested in graduate credit should see FSoS 5026. Meets concurrently with 5026)

Fall Qtr, Sec 1, T, 6:15-9:15, BorH 335, StP Campus

**FSoS 3027 CURRENT ISSUES AND PHARMACOLOGY OF ALCOHOL AND DRUG ABUSE.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Series of lectures with emphasis on the historical and cultural perspectives of drug use and abuse. Additional topics: men's, women's, adolescents', diversity, and sexuality issues. Fundamental principles of pharmacology as applied to the various classifications of mood altering chemicals. (No prereq. *Students working toward the certificate must take this course A-F.* Students interested in graduate credit should see FSoS 5027. Meets concurrently with 5027)

Winter Qtr, Sec 1, T, 6:15-9:15, GrnH 110, StP Campus

**FSoS 3028 TREATMENT OF ALCOHOL AND DRUG USE PROBLEMS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Continuum of treatment responses and treatment planning for substance abusers. Topics covered include prevention, self-help groups, professional ethics, H.I.V./AIDS, alternative treatments, after-care programming, evaluation, and some pragmatics of counseling. (No prereq. *Students working toward the certificate must take this course A-F.* Students interested in graduate credit should see FSoS 5028. Meets concurrently with 5028)

Spring Qtr, Sec 1, T, 6:15-9:15, BorH 335, StP Campus

**FSoS 3029 COUNSELING SKILLS PRACTICUM I.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Utilizes dyadic role-playing and group exercises to increase competency in the area of basic counseling skills. Topics include assessment of counselor needs and motivations, non-verbal communication, accurate empathy, self-disclosure, and questioning. Video tape will assist students in feedback. (No prereq. *Students working toward the certificate must take this course A-F.* Students interested in graduate credit should see FSoS 5029. Meets concurrently with FSoS 5029. Limited to a combined total of 20)

Fall Spec Term, ★Sec 1, W, 6-9, Sept. 27-Nov. 15, McNH 144, StP Campus, and Sa, 9 a.m.-5, Oct. 7, McNH 144, StP Campus, Meyer (Limited to a combined total of 40)

Winter Spec Term, ★Sec 2, W, 6-9, Jan. 3-Feb. 21, McNH 144, StP Campus, and Sa, 9 a.m.-5, Jan. 13, McNH 375, StP Campus

Spring Spec Term, ★Sec 3, W, 6-9, Mar. 27-May 15, McNH 144, StP Campus, and Sa, 9 a.m.-5, Apr. 6, McNH 144, StP Campus

**FSoS 3030 COUNSELING SKILLS PRACTICUM II.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Students to facilitate client's exploration of self and understanding of the problem, and assist in setting therapeutic goals. Topics covered include concreteness, advanced empathy, immediacy, confrontation, reframing, and problem solving. Use of video tape assists students in feedback. (Prereq 3029. *Students working toward the certificate must take this course A-F.* Students interested in graduate credit should see FSoS 5030. Meets concurrently with FSoS 5030. Limited to a combined total of 20)

Fall Spec Term, ★Sec 1, M, 6-9, Sept. 25-Nov. 13, McNH 144, StP Campus, and Sa, 9 a.m.-5, Sept. 30, McNH 144, StP Campus, Fabunni

Winter Spec Term, ★Sec 2, M, 6-9, Jan. 8-Mar. 4 (no meeting Jan. 15), McNH 144, StP Campus, and Sa, 9 a.m.-5, Jan. 13, McNH 144, StP Campus, Fabunni

Spring Spec Term, ★Sec 3, M, 6-9, Mar. 25-May 13, McNH 144, StP Campus, and Sa, 9 a.m.-5, Mar. 30, McNH 144, StP Campus

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**FSoS 3031 COUNSELING SKILLS PRACTICUM III.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Designed to provide students with exposure to advanced therapeutic methods. Topics include double bind theory, use of paradox, working with resistant clients, neurolinguistic programming and self-care. (Prereq 3030 or #. *Students working toward the certificate must take this course A-F.* Students interested in graduate credit should see FSoS 5031. Meets concurrently with FSoS 5031. Limited to a combined total of 20)

Fall Spec Term, ★Sec 1, W, 6-9, Oct. 4-Nov. 8, McNH 198, StP Campus, Colgan, and Sa, 9 a.m.-4, Oct. 28, Nov. 4, McNH 198, StP Campus. *No late fee through Sept. 27*

Spring Spec Term, ★Sec 2, W, 6-9, Apr. 3-May 8, McNH 198, StP Campus, Colgan, and Sa, 9 a.m.-4, Apr. 13, 20, McNH 198, StP Campus. *No late fee through Mar. 27*

**FSoS 3032 CHEMICAL ABUSE AND FAMILIES: AN OVERVIEW.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

An introduction to marriage and family systems with particular application to the families in which alcohol or drug abuse is a problem. Topics include family types, family of origin, structural family therapy, family systems theory, and alcoholism. Review of literature. *Students working toward the certificate must take this course A-F.* (No prereq. Students interested in graduate credit should see FSoS 5032. Meets concurrently with FSoS 5032. Limited to a combined total of 40)

Fall Spec Term, ★Sec 1, Th, 6-9:30, Sept. 28-Nov. 9, McNH 198, StP Campus, and Sa, 9 a.m.-5, Oct. 21, McNH 198, StP Campus, Chamblee

Spring Spec Term, ★Sec 2, Th, 6-9:30, Apr. 4-May 23, (no meeting May 9), McNH 198, StP Campus, and Sa, 9 a.m.-5, May 4, McNH 198, StP Campus, Chamblee. *No late fee through Mar. 28*

**FSoS 3034 TOPICS IN ALCOHOL AND DRUG ABUSE.** 1-5 credits, tuition\* each credit: Resident \$86; Non-resident \$249.40.

Selected readings and/or projects in alcohol and drug use and problems and evaluation of students' mastery of the assigned study. **Must be taken A-F.** (Prereq written #. Requests for permission to register must be made to the Alcohol and Drug Counseling Education Program, Family Social Science, University of Minnesota, 388 McNeal Hall, 1985 Buford Ave., St. Paul, MN 55108)

Fall Qtr, Sec 1, Arr., Colgan, Fabunmi, Goodman  
Winter Qtr, Sec 2, Arr., Colgan, Fabunmi, Goodman

Spring Qtr, Sec 3, Arr., Colgan, Fabunmi, Goodman

(See also REX 0320, Alcohol and Degenerative Diseases)

**FSoS 3035 CLINICAL INTERNSHIP IN CHEMICAL USE PROBLEMS.** 2-18 credits, tuition\* each credit: Resident \$86; Non-resident \$249.40. (*Plus additional \$25 special fee for each placement*)

A 1000-hour rotating clinical internship designed to strengthen student competencies. Students are placed in 3 to 4 different community agencies/treatment centers. A separate registration is required for each placement. *Also required is a closed class permission slip which is available by calling the program office, 625-3778. Must be taken S-N.* (Prereq 3026, 3027, 3028, 3029, 3030, 3032, 3037 and written #. Students interested in graduate credit should see FSoS 5035, sec 1, 2, 3)

Fall Qtr, Sec 1, Arr., Fabunmi

Winter Qtr, Sec 2, Arr., Fabunmi

Spring Qtr, Sec 3, Arr., Fabunmi

**FSoS 3037 GROUP THERAPY: THEORY AND PRACTICE.** 3 credits, tuition\*: Resident \$258; Non-resident \$748.20.

Lecture, and small group experience aimed at providing an introduction to group therapy concepts. Topics include stages of group development, stages of affective development, Hill Interaction Matrix, leadership roles and functions, Yalom's curative factors, and understanding group process. *Students working toward the certificate must take this course A-F.* (No prereq. Students interested in graduate credit should see FSoS 5037. Meets concurrently with 5037. Limited to a combined total of 20)

Fall Spec Term, ★Sec 1, ThFSa, 9 a.m.-5, Nov. 16-18, McNH 274, StP Campus, Colgan, Goodman. *No late fee through Nov. 9*

Winter Spec Term, ★Sec 2, ThFSa, 9 a.m.-5, Feb. 15-17, McNH 375, StP Campus, Colgan. *No late fee through Feb. 8*

Spring Spec Term, ★Sec 3, ThFSa, 9 a.m.-5, May 9-11, McNH 274, StP Campus, Colgan. *No late fee through May 2*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**FSoS 5008 INTROSPECTIVE WORKSHOP, ETHICS, AND CLINICAL SUPERVISION.** 1 or 2 credits, tuition\* each credit: Resident \$86; Non-resident \$249.40; Resident Graduate credit \$118; Non-resident Graduate credit \$259.60; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Special topics, ethical issues, nonregular program or course in Family Social Science for pre-service or in-service helping professionals. **Must be taken S-N.** (Prereq 3035. Qualified students may register for graduate credit at the University of Minnesota. Limited to 10)

Fall Qtr, ★Sec 1, Arr., Fabunmi

Winter Qtr, ★Sec 2, Arr., Fabunmi

Spring Qtr, ★Sec 3, Arr., Fabunmi

**FSoS 5026 ASSESSMENT OF ALCOHOL AND DRUG USE PROBLEMS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

See course description for FSoS 3026. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3026)

Fall Qtr, Sec 1, T, 6:15-9:15, BorH 335, StP Campus

**FSoS 5027 CURRENT ISSUES AND PHARMACOLOGY OF ALCOHOL AND DRUG ABUSE.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

See course description for FSoS 3027. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3027)

Winter Qtr, Sec 1, T, 6:15-9:15, GrnH 110, StP Campus

**FSoS 5028 TREATMENT OF ALCOHOL AND DRUG USE PROBLEMS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

See course description for FSoS 3028. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3028)

Spring Qtr, Sec 1, T, 6:15-9:15, BorH 335, StP Campus

**FSoS 5029 COUNSELING SKILLS PRACTICUM I.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

See course description for FSoS 3029. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3029. Limited to a combined total of 20)

Fall Spec Term, ★Sec 1, W, 6-9, Sept. 27-Nov.

15, McNH 144, StP Campus, and Sa, 9 a.m.-5, Oct. 7, McNH 144, StP Campus, Meyer

(Limited to a combined total of 40)

Winter Spec Term, ★Sec 2, W, 6-9, Jan. 3-Feb.

21, McNH 144, StP Campus, and

Sa, 9 a.m.-5, Jan. 13, McNH 375, StP Campus

Spring Spec Term, ★Sec 3, W, 6-9, Mar. 27-May

15, McNH 144, StP Campus, and

Sa, 9 a.m.-5, Apr. 6, McNH 144, StP Campus

**FSoS 5030 COUNSELING SKILLS PRACTICUM II.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

See course description for FSoS 3030. **Must be taken A-F.** (Prereq 5029. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3030. Limited to a combined total of 20)

Fall Spec Term, ★Sec 1, M, 6-9, Sept. 25-Nov.

13, McNH 144, StP Campus, and

Sa, 9 a.m.-5, Sept. 30, McNH 144, StP

Campus, Fabunmi

Winter Spec Term, ★Sec 2, M, 6-9, Jan. 8-Mar. 4

(no meeting Jan. 15), McNH 144, StP Campus,

and Sa, 9 a.m.-5, Jan. 13, McNH 144, StP

Campus, Fabunmi

Spring Spec Term, ★Sec 3, M, 6-9, Mar. 25-May

13, McNH 144, StP Campus, and

Sa, 9 a.m.-5, Mar. 30, McNH 144, StP Campus

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**FSoS 5031 COUNSELING SKILLS PRACTICUM III.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

See description for FSoS 3031. **Must be taken A-F.** (Prereq 5030. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3031. Limited to a combined total of 20)

Fall Spec Term, ★Sec 1, W, 6-9, Oct. 4-Nov. 8, McNH 198, StP Campus, Colgan, and Sa, 9 a.m.-4, Oct. 28, Nov. 4, McNH 198, StP Campus. *No late fee through Sept. 27*

Spring Spec Term, ★Sec 2, W, 6-9, Apr. 3-May 8, McNH 198, StP Campus, Colgan, and Sa, 9 a.m.-4, Apr. 13, 20, McNH 198, StP Campus. *No late fee through Mar. 27*

**FSoS 5032 CHEMICAL ABUSE AND FAMILIES: AN OVERVIEW.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

See course description for FSoS 3032. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3032. Limited to a combined total of 40)

Fall Spec Term, ★Sec 1, Th, 6-9:30, Sept. 28-Nov. 9, McNH 198, StP Campus, and

Sa, 9 a.m.-5, Oct. 21, McNH 198, StP Campus, Chamblee

Spring Spec Term, ★Sec 2, Th, 6-9:30, Apr. 4-May 23, (no meeting May 9), McNH 198, StP Campus, and Sa, 9 a.m.-5, May 4, McNH 198, StP Campus, Chamblee. *No late fee through Mar. 28*

**FSoS 5034 TOPICS IN ALCOHOL AND DRUG ABUSE.** 2-5 credits, tuition\* each credit: Resident \$86; Non-resident \$249.40; Resident Graduate credit \$118; Non-resident Graduate credit \$259.60; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Selected readings and/or projects in alcohol and drug use problems and evaluation of students' mastery of the assigned study. **Must be taken A-F.** (Prereq written #. Requests for permission to regis-

ter must be made to the Alcohol and Drug Counseling Education Program, Family Social Science, 388 McNeal Hall, 1985 Buford Ave., St. Paul, MN 55108. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr, Sec 1, Arr., Colgan, Fabunmi, Goodman  
Winter Qtr, Sec 2, Arr., Colgan, Fabunmi, Goodman  
Spring Qtr, Sec 3, Arr., Colgan, Fabunmi, Goodman

**FSoS 5035 CLINICAL INTERNSHIP IN CHEMICAL USE PROBLEMS.** 2-18 credits, tuition\* each credit: Resident \$86; Non-resident \$249.40; Resident Graduate credit \$118; Non-resident Graduate credit \$259.60; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10. (*Plus additional \$25 special fee for each placement*)

See course description for FSoS 3035. A separate registration is required prior to the start of each individual internship placement. *Also required is a closed class permission slip which is available by calling the program office, 625-3778. Must be taken S-N.* (Prereq 3026, 3027, 3028, 3029, 3030, 3032, 3037, and written #. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr, Sec 1, Arr., Fabunmi  
Winter Qtr, Sec 2, Arr., Fabunmi  
Spring Qtr, Sec 3, Arr., Fabunmi

**FSoS 5037 GROUP THERAPY: THEORY AND PRACTICE.** 3 credits, tuition\*: Resident \$258; Non-resident \$748.20; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

See course description for FSoS 3037. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3037. Limited to a combined total of 20)

Fall Spec Term, ★Sec 1, ThFSa, 9 a.m.-5, Nov. 16-18, McNH 274, StP Campus, Colgan, Goodman. *No late fee through Nov. 9*

Winter Spec Term, ★Sec 2, ThFSa, 9 a.m.-5, Feb. 15-17, McNH 375, StP Campus, Colgan. *No late fee through Feb. 8*

Spring Spec Term, ★Sec 3, ThFSa, 9 a.m.-5, May 9-11, McNH 274, StP Campus, Colgan. *No late fee through May 2*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

Please call the Alcohol and Drug Counseling Education Program office for further information at (612) 625-3778.

For information on noncredit conferences or workshops in Family Social Science, please contact the Department of Conferences and Institutes, 107 Armory (625-3020).

For information on undergraduate degree programs, please call or write College of Human Ecology, University of Minnesota, St. Paul, Minnesota 55108 ([612] 624-1717).

## Finance (BFin)

(735 Management/Economics: 624-2888)

### Carlson School of Management

Textbooks for most BFin courses are available at University of Minnesota Bookstore—West Bank (625-3000).

(See also *General College*; and *Financial, Consumer, and Health Issues* in Practical Scholar non-credit section)

Scott Haniford, Teaching Assistant  
John Krainer, Teaching Assistant  
Gahng Sohk Koh, Teaching Assistant  
Michael Sher, Lecturer  
Greg Swinehart, Teaching Assistant

Your attention is called to the Credit and Financial Management Certificate program. See the Degrees and Certificates section of this Bulletin.

### Carlson School of Management degree students must take degree Finance courses A-F.

**Note**—Students taking Carlson School of Management upper division undergraduate courses through CEE are expected to have completed the equivalent of 90 quarter college credits with a minimum of a "B-" grade average.

**BFin 3000 FINANCE FUNDAMENTALS.** 4 credits, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60. (IS)

A survey of financial markets and a comprehensive introduction to the basics of finance: among them, valuation theory and management decision-making with respect to sources and uses of funds. **May not**

**be taken S-N.** (Prereq Acct 1050 and at least 90 credits completed or in progress. Limited to 60)

Fall Qtr, ★Sec 1, T, 5:30-9, AndH 370

Fall Qtr, ★Sec 2, Th, 5:30-9, AndH 370

Winter Qtr, ★Sec 3, T, 5:30-9, AndH 370

Winter Qtr, ★Sec 4, Th, 5:30-9, AndH 370

Spring Qtr, ★Sec 5, M, 5:30-9, AndH 370

Spring Qtr, ★Sec 6, T, 5:30-9, AndH 370

(See also Practical Scholar financial planning courses, page 462)

**BFin 3100 FINANCIAL MANAGEMENT.** 4 credits, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60.

Builds on concepts introduced in BFin 3000. Corporate financing and dividend policies, cost of capital estimation, leasing, and financial planning. Viewpoint of a corporation's chief financial officer used. Lectures, balanced by case discussions and readings, are used to prepare students to apply finance principles to actual business situations. **Must be taken A-F.** (Prereq 3000 and at least 90 credits completed or in progress. Limited to 60)

Fall Qtr, ★Sec 1, W, 5:30-9, BlegH 215

**BFin 3200 FINANCIAL MARKETS AND INTEREST RATES.** 4 credits, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60.

Survey of financial markets in developed economies. Emphasis on fixed-income markets. The term structure of interest rates. The inflation rate and interest rates. Exchange rates and interest rates. Introduction to interest rate futures. **Must be taken A-F.** (Prereq 3000 and at least 90 credits completed or in progress. Limited to 50)

Winter Qtr, ★Sec 1, W, 5:30-9, BlegH 155

**BFin 3300 SECURITIES ANALYSIS AND PORTFOLIO MANAGEMENT.** 4 credits, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60.

Introduces decision procedures in a variety of financial markets. The banking system and other financial intermediaries, risk-return relationships of various marketable securities, analytical techniques of portfolio management in the context of the nation's changing financial markets. **Must be taken A-F.** (Prereq 3000 and at least 90 credits completed or in progress. Limited to 50)

Spring Qtr, ★Sec 1, W, 5:30-9, BlegH 105

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

### Certified Financial Planner (CFP)

The University no longer offers CFP courses.

### Finnish

(See Scandinavian Languages)

### Fisheries and Wildlife (FW)

(200 Hodson Hall: 624-3600)

#### College of Natural Resources

Textbooks for most FW courses are available at University of Minnesota Bookstore—St. Paul (624-9200).

(See also CSW 0701, *The Anatomy of a Trout Stream*)

**Joint Day/Extension Classes**—You may register through Extension for most day school classes scheduled before 4 p.m. in Fisheries and Wildlife. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

*No FW courses offered through Extension Classes 1995-96.*

### Food Science and Nutrition (FScN)

(225 Food Science and Nutrition: 624-1290)

#### College of Agricultural, Food, and Environmental Sciences and College of Human Ecology

Textbooks for FScN courses on the Minneapolis campus are available at University of Minnesota Bookstore—Health Sciences (625-8600); at University of Minnesota Bookstore—St. Paul (624-9200) for courses on that campus.

(See also *Mental Health and Nutrition* in Research Explorations, page 477)

Paul B. Addis, Professor of Food Science and Nutrition

Elaine H. Asp, Associate Professor of Food Science  
Linda J. Brady, Associate Professor of Nutrition and Nutrition Program Coordinator

William M. Breene, Professor of Food Science and Technology

Francis F. Busta, Professor; Department Head  
R. Gary Fulcher, Professor of Food Science  
Daniel D. Gallaher, Associate Professor of Nutrition

Madge N. Hanson, Assistant Professor in Clinical Nutrition

Debra P. Keenan, Assistant Professor of Nutrition  
Mindy S. Kurzer, Assistant Professor of Nutrition  
Gary Reineccius, Professor of Food Science

Benjamin H. Senauer, Professor of Agricultural and Applied Economics

Mary K. Schmidl, Director of Research, Sandoz Nutrition

David E. Smith, Professor of Dairy and Food Technology

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in FScN. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**FScN 1020 INTRODUCTORY MICROBIOLOGY.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Fundamental principles of microbiology. Characteristics of bacteria, yeasts, molds, and other microorganisms; their importance in the preparation and preservation of foods, and their relation to the health and well-being of the individual and the family. (No prereq. Limited to 24)

Fall Qtr, ★Sec 1, Lect M, 5:05-6:45, FScN 15;

Lect Th, 5:05-5:55, FScN 15; Lab Th, 6-8, FScN 218, StP Campus

**FScN 1102 TECHNOLOGY OF FOOD PROCESSING.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20. (IS)

Introduction to the technology of processing of foods with special reference to the prevention of biological, microbiological, physical, and chemical deterioration. Change in food composition, microbiological safety, food laws and regulations, technologies of the major food processes such as canning, freezing, and drying. (Prereq high school chemistry and biology. A joint Day/Extension class)

Spring Qtr, ○Sec 1, TTh, 4:05-5:45, FScN 15, StP Campus

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



**FScN 1612 PRINCIPLES OF NUTRITION.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20. (IS)

Fundamental concepts: Human nutritional requirements, function of nutrients, nature of deficiencies. Vegetarianism, weight loss, fad diets, activity, obesity, cancer, heart disease, food processing, safety, world food problems. (Prereq high school chemistry and biology. Lectures meet concurrently each quarter. Fall sections are joint Day/Extension and limited to 10 Extension students each. Winter and spring sections are Extension only and limited to 30 each)

Fall Qtr, ★●Sec 1, Lect TTh, 4:15-5:30, MoosT 2-650; Rec M, 5:45-6:35, Arch 45, Kurzer

Fall Qtr, ★●Sec 2, Lect TTh, 4:15-5:30, MoosT 2-650; Rec T, 3:10-4, AkerH 211, Kurzer

Fall Qtr, ★●Sec 3, Lect TTh, 4:15-5:30, MoosT 2-650; Rec T, 5:45-6:35, Arch 60, Kurzer

Fall Qtr, ★●Sec 4, Lect TTh, 4:15-5:30, MoosT 2-650; Rec T, 5:45-6:35, Arch 45, Kurzer

Fall Qtr, ★●Sec 5, Lect TTh, 4:15-5:30, MoosT 2-650; Rec W, 5:45-6:35, Arch 45, Kurzer

Fall Qtr, ★●Sec 6, Lect TTh, 4:15-5:30, MoosT 2-650; Rec W, 5:45-6:35, Arch 60, Kurzer

Fall Qtr, ★●Sec 7, Lect TTh, 4:15-5:30, MoosT 2-650; Rec Th, 3:10-4, AkerH 211, Kurzer

Fall Qtr, ★●Sec 8, Lect TTh, 4:15-5:30, MoosT 2-650; Rec Th, 3:10-4, AkerH 309, Kurzer

Fall Qtr, ★●Sec 9, Lect TTh, 4:15-5:30, MoosT 2-650; Rec Th, 5:45-6:35, Arch 60, Kurzer

Fall Qtr, ★●Sec 10, Lect, TTh, 4:15-5:30, MoosT 2-650; Rec Th, 5:45-6:35, Arch 45, Kurzer

Winter Qtr, ★Sec 11, Lect Th, 6-8:30, MoosT 2-650; Rec Th, 4:55-5:45, Arch 45, Addis

Winter Qtr, ★Sec 12, Lect Th, 6-8:30, MoosT 2-650; Rec Th, 8:45-9:35, Arch 45, Addis

Spring Qtr, ★Sec 13, Lect T, 6-8:30, PWB 2-470; Rec T, 4:55-5:45, Arch 30, Hanson

Spring Qtr, ★Sec 14, Lect T, 6-8:30, PWB 2-470; Rec T, 4:55-5:45, Arch 20, Hanson

Spring Qtr, ★Sec 15, Lect T, 6-8:30, PWB 2-470; Rec T, 8:45-9:35, Arch 30, Hanson

Spring Qtr, ★Sec 16, Lect T, 6-8:30, PWB 2-470; Rec T, 8:45-9:35, Arch 45, Hanson

Spring Qtr, ★Sec 17, Lect T, 6-8:30, PWB 2-470; Rec Th, 4-4:50, Arch 30, Hanson

Spring Qtr, ★Sec 18, Lect T, 6-8:30, PWB 2-470; Rec Th, 4-4:50, Arch 45, Hanson

Spring Qtr, ★Sec 19, Lect T, 6-8:30, PWB 2-470; Rec Th, 6-6:50, Arch 60, Hanson

Spring Qtr, ★Sec 20, Lect T, 6-8:30, PWB 2-470; Rec Th, 6-6:50, Arch 20, Hanson

**FScN 3610 COMMUNITY NUTRITION.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45.

Introduction to the goals of community food and nutrition programs including national, international, public, and private programs; an overview of cultural food patterns; and the management of (assessing needs, planning, implementing, and evaluating) food and nutrition programs for groups of people. (Prereq 1612 or equivalent, 5 cr Anth, Psy, or Soc. A joint Day/Extension class)

Fall Qtr, ●Sec 1, MW, 4:05-5:25, ABLMS 125, StP Campus, Keenan

**FScN 5111 INDEPENDENT STUDY IN FOOD SCIENCE AND NUTRITION.** 1-5 credits, tuition\* each credit: Resident \$93.50; Non-resident \$271.15; Resident Graduate credit \$118; Non-resident Graduate credit \$259.60; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Individual laboratory or library research in an area related to food science and nutrition. (Prereq Δ. Call 624-6753 for more information. May be repeated for credit. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, ●Sec 1, Time arr.

Winter Qtr, ●Sec 2, Time arr.

Spring Qtr, ●Sec 3, Time arr.

**FScN 5390 INTRODUCTION TO FOOD LAW.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Analysis of federal and state legal requirements and case law history affecting production, processing, packaging, marketing, and distribution of food and food products. (Prereq 1102 or #. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr, Sec 1, Th, 5:30-9, FScN 23, StP Campus, Labuza

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**FScN 5474 FOOD MARKETING ECONOMICS.** 4 credits, §AgEc 5550, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Economics of food marketing in U.S. Covers food consumption trends; consumer food behavior; food expenditure and consumption data; consumer survey methodology; the food distribution and retailing system; food policy issues related to food marketing. Students pursue individual and group projects. (Prereq AgEc 3101 or #. Meets concurrently with AgEc 5550. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr, ●Sec 1, TTh, 4:30-6:10, McNH 33, 144, StP Campus, Asp, Senauer

**FScN 5524 SENSORY EVALUATION OF DAIRY PRODUCTS.** 1 credit, tuition\* (includes \$10 course fee): Resident \$103.50; Non-resident \$281.15; Resident Graduate credit \$128; Non-resident Graduate credit \$269.60; Resident Graduate School credit \$225.50; Non-resident Graduate School credit \$484.10.

Laboratory and commercial procedures for evaluating sensory properties and market quality of dairy products. Causes and identification of common defects in flavor, physical properties, and appearance. (Prereq 3102. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr, ●Sec 1, W, 5:30-7:30, FScN 150, StP Campus, Smith

**FScN 5550 GRAINS: INTRODUCTION TO CEREAL CHEMISTRY AND TECHNOLOGY.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Origins, structure, biochemistry, and cellular properties of major cereal grains as they relate to primary (milling) and secondary (production of cereal products) processing. Relationship between structure and functionality as determinants of quality in grains and grain products. Quality evaluation technologies. (Prereq Biol 1009 or Chem 1052. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr, ●Sec 1, M, 5:30-9:30, FScN 23, StP Campus, Fulcher

**FScN 5622 MACRONUTRIENT METABOLISM.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Physiological function and metabolic fate of carbohydrates, lipids and proteins, and their involvement in fulfilling energy needs for maintenance, growth, and work. (Prereq 3612, Biol 5001, Phsl 3051. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, ●Sec 1, MW, 4:30-6:10, ClaOff B30, StP Campus, L Brady

**FScN 5623 VITAMIN AND MINERAL METABOLISM.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Nutritional, biochemical and physiological function of essential vitamins and minerals in humans and experimental animal models. (Prereq 3612, Biol 5001, Phsl 3051. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr, ●Sec 1, MW, 4:30-6:10, ClaOff B42, StP Campus, Gallaher

**FScN 5624 HUMAN PROTEIN AND ENERGY UTILIZATION.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Regulation of human protein and energy utilization, interactions, adaptations: critical evaluations of methods of determining requirements, technical and ethical problems in human experimentation and determination of recommended levels of intake. (Prereq 5622. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr, ●Sec 1, MW, 4:30-6:10, ClaOff B42, StP Campus, Kurzer

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**FScN 5643 WORLD FOOD PROBLEMS.** 3 credits, §AgEc 5790, §Agro 5200, §CAPS 5280, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

A multidisciplinary approach to social, economic, and technical problems of feeding the world's growing population. Principles sought from social and economic sciences and plant, animal, and food sciences for their application to world food problems. (Prereq sr or grad student with #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with AgEc 5790, LACS 5280, Agro 5200 and CAPS 5280. A joint Day/Extension class)

Fall Qtr, ●Sec 1, W, 6-9, ClaOff B35, StP Campus, Breene, Busta

**FScN 5665 APPLIED MEDICAL NUTRITION THERAPY I.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Nutritional assessment and support; fluid and electrolyte balance; diet drug interactions. Nutritional intervention in disorders of the gastrointestinal system and in cancer. (Prereq Biol 5001 or ¶5001; Phsl 3051 or 1002; LaMP 5177 or ¶5177. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, ●Sec 1, Th, 5-7:30, ABLMS 125, StP Campus, Hanson

**FScN 5666 APPLIED MEDICAL NUTRITION THERAPY II.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Continuation of 5665. Pathology, treatment, and nutritional therapy of diseases of the cardiovascular and respiratory systems and common disorders of the endocrine system, notably diabetes mellitus; nutrition intervention in obesity. (Prereq 5665; 5662 or ¶5662; or demonstrated equivalent. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr, ●Sec 1, Th, 5-7:30, ABLMS 125, StP Campus, Hanson

**FScN 5667 APPLIED MEDICAL NUTRITION THERAPY III.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Continuation of 5666. Pathology, treatment, and diet therapy in diseases of kidney and urinary tract. Therapeutic management of selected central nervous system disorders, inborn errors of metabolism, and allergies. Special nutritional considerations in care of pediatric patients with common pathological disorders. (Prereq 5665, 5666; or demonstrated equivalency. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr, ●Sec 1, Th, 5-7:30, ABLMS 125, StP Campus, Hanson

**FScN 5693 SPECIAL TOPICS: DESIGNER AND MEDICAL FOODS.** 2 credits, tuition\*: Resident \$187; Non-resident \$542.30; Resident Graduate credit \$236; Non-resident Graduate credit \$519.20; Resident Graduate School credit \$431; Non-resident Graduate School credit \$948.20.

Introduction to the application of nutritional science to development of designer and medical foods. Overview of the principles and processing necessary to evaluate, manufacture, and market such products. Areas include scientific basis, legal requirements, animal and clinical evaluation, consumer usage versus need along with review of products available in the U.S. and internationally. Special dietary products will be reviewed and evaluated ranging from parental and enteral nutrition to obesity and weight control along with various products designed for a wide range of age groups including the infant and the elderly. (Prereq 3612. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr, Sec 1, T, 5:30-7:30, FScN 23, StP Campus, Schmidl

**FScN 8311 FLAVOR CHEMISTRY.** 3 credits, tuition\*: Resident Graduate credit \$646.50; Non-resident Graduate credit \$1422.30.

Chemistry of food flavor including biogenesis of flavor, production during processing, deterioration during storage, potentiation, duplication as an art and science, and use in food industry. (Prereq 5312 or #. Open only to students admitted to the University of Minnesota Graduate School. A joint Day/Extension class)

Fall Qtr, ●Sec 1, M, 6:15-9:15, FScN 23, StP Campus, Reineccius

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

### Foreign Studies SPAN (FSSP)

(107 Nicholson Hall: 626-1083)

#### College of Liberal Arts

Textbooks are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000)

(See also Classical and Near Eastern Studies)

(For information about SPAN—Student Project for Amity Among Nations—see page 367.)

Theodanis Stavrou, Professor of History,

Modern Greek Studies

Soterios Stavrou, Lecturer, Modern Greek Studies

**FSSP 3001-3002-3003 LANGUAGE, CULTURE AND SOCIETY: MODERN GREEK.** 5 credits each quarter, \$MdGk 1101-1102-1103, tuition\* each quarter: Resident \$430; Non-resident \$1247.

A concentrated study of the fundamentals—reading, writing and conversation of Modern Greek. The emphasis is on the language as a key to understanding culture and society in Greece. The course is usually offered for SPANners going to Greece, but it is open to others. (No prereq for 3001; 3001 or equiv for 3002; 3002 or equiv for 3003. Meets concurrently with MdGk 1101-1102-1103)

Fall Qtr, 3001, Sec 1, Th, 6:20-8:50, BlegH 245, T Stavrou

Winter Qtr, 3002, Sec 2, Th, 6:20-8:50, BlegH 105, T Stavrou

Spring Qtr, 3003, Sec 3, Th, 6:20-8:50, BlegH 245, T Stavrou

**FSSP 3004-3005-3006 LANGUAGE, CULTURE AND SOCIETY: INTERMEDIATE MODERN GREEK.** 5 credits each quarter, \$MdGk 1104-1105-1106, tuition\* each quarter: Resident \$430; Non-resident \$1247.

A review of the fundamentals of syntax through a variety of readings from Modern Greek prose writers and poets. Provides additional grammatical elements which are reinforced through reading, conversation, and composition. Offered for SPANners returning from study in Greece or those with the equivalent of one year of Modern Greek. *There must be 10 or more students enrolled in order for a section to be held.* (Prereq 3003 or equiv for 3004; 3004 or equiv for 3005; 3005 or equiv for 3006. Meets concurrently with MdGk 1104-1105-1106)

Fall Qtr, 3004, Sec 1, M, 6:20-8:50, SocSci 1383, S Stavrou

Winter Qtr, 3005, Sec 2, M, 6:20-8:50, SocSci 1383, S Stavrou

Spring Qtr, 3006, Sec 3, M, 6:20-8:50, SocSci 1383, S Stavrou

### Forest Products (ForP)

(203 Kaufert Laboratory: 624-9219)

#### College of Natural Resources

Textbooks for most ForP courses are available at University of Minnesota Bookstore—St. Paul (624-9200).

R. O. Gertjensan, Professor

Patrick Huelman, Associate Professor

Robert T. Seavey, Research Associate

**Joint Day/Extension Classes**—You may register through Extension for most day school classes scheduled before 4 p.m. in Forest Products. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**ForP 5405 PAPER IN TODAY'S WORLD.** 3 credits, \$5305, tuition\* (includes \$15 course fee): Resident \$295.50; Non-resident \$828.45; Resident Graduate credit \$369; Non-resident Graduate credit \$793.80; Resident Graduate School credit \$661.50; Non-resident Graduate School credit \$1437.30.

Intended primarily for elementary and secondary school teachers although other interested students may enroll. Successful completion of the course will enable a teacher to prepare a teaching unit on pulp and paper for use in an elementary, junior high, or senior high school science class. The course consists of lectures, laboratories, and demonstrations on pulp and paper manufacture, properties and characteristics of paper, uses for paper, specialty papers, and recycling of paper. The Kaufert Laboratory is completely equipped with pulp and paper equipment, including a pilot plant paper machine. Course requirements include two laboratory reports and a final examination. For graduate credit, an additional report is required. **Not open to Forest Products majors.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 15)

Winter Spec Term, ★Sec 1, Fri., Jan. 26, 1996, 6-9; Sat., Jan. 27, 1996, 9 a.m.-4:30; Sun., Jan. 28, 1996, 9 a.m.-4:30; Mon., Jan. 29, 1996, 6-9; Kaufert Laboratory, room 125, StP Campus, Gertjensan, Erickson. *No late fee through Jan. 5*

Winter Spec Term, ★Sec 2, Fri., Feb. 2, 1996, 6-9; Sat., Feb. 3, 1996, 9 a.m.-4:30; Sun., Feb. 4, 1996, 9 a.m.-4:30; Mon., Feb. 5, 1996, 6-9; Kaufert Laboratory, room 125, STP Campus, Gertjensan, Erickson. *No late fee through Jan. 12*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**ForP 5410 UNDERSTANDING WOOD.** 2 credits, \$5305, tuition\* (includes \$10 course fee); Resident \$197; Non-resident \$552.30.

For the woodworking professional and the serious craftsman. This course provides in-depth instruction about the cellular structure of wood, the identification of hardwoods and softwoods, and about the interaction of water and wood. Hands-on evaluation of wood samples. No prior technical training in wood properties is needed, although general experience with woodworking is helpful. **Not open to Forest Products majors.** (No prereq. May not be taken for graduate credit at the University of Minnesota)

Fall Qtr, Sec 1, T, 6:30-9, KaufL 125, StP Campus, Seavey

**ForP 5412 A SYSTEMS APPROACH TO RESIDENTIAL CONSTRUCTION.** 3 credits, \$5305, tuition\* (includes \$5 course fee); Resident \$285.50; Non-resident \$818.45; Resident Graduate credit \$359; Non-resident Graduate credit \$783.80; Resident Graduate School credit \$651.50; Non-resident Graduate School credit \$1427.30.

Investigates the dynamic and interrelated issues of energy, moisture control, and indoor air quality in residential buildings. The emphasis is on design, construction, and operational aspects of the house to provide an energy efficient, durable structure and a healthy living environment. Special considerations will be given to the interaction between moisture and wood products within the building system. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 50)

Winter Qtr, ★Sec 1, Th, 5:30-8, KaufL 302, StP Campus, Huelman, Seavey

## Forest Resources (FR)

(110 Green Hall: 624-3400)

### College of Natural Resources

Textbooks for most FR courses are available at University of Minnesota Bookstore—St. Paul (624-9200).

Alan R. Ek, Professor

Roger T. Johnson, Professor in Curriculum and Instruction

Carl E. Vogt, Instructor

**Joint Day/Extension Classes**—You may register through Extension for most day school classes scheduled before 4 p.m. in Forest Resources. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**FR 5403 FUNDAMENTALS OF NATURAL RESOURCE EDUCATION.** 3 credits, tuition\* (includes \$5 course fee); Resident \$285.50; Non-resident \$818.45; Resident Graduate credit \$359; Non-resident Graduate credit \$783.80; Resident Graduate School credit \$651.50; Non-resident Graduate School credit \$1427.30.

Intended for elementary school teachers. Focuses on an understanding of the forest community, the tools used by the forester, and an awareness of effective forest management practices. Forestry-related indoor and outdoor activities which can be translated for classroom use will be featured. Major forestry and natural resource issues are discussed. Development of outdoor teaching skills in an urban forest environment are emphasized. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 30)

Fall Spec Term, ★Sec 1, Fri., Sept. 22, 1995, 6:30-9:30; Sat., Sept. 23, 1995, 8:30 a.m.-5; Sun., Sept. 24, 1995, 9 a.m.-4, Wood Lake Nature Center, Richfield (66th and Lakeshore Drive); Tues., Nov. 14, 1995, 6:30-9:30, GrnH, StP Campus, Johnson, Vogt

Spring Spec Term, ★Sec 2, Fri., Apr. 12, 1996, 6:30-9:30; Sat., Apr. 13, 1996, 8:30 a.m.-5; Sun., Apr. 14, 1996, 9 a.m.-4, Wood Lake Nature Center, Richfield (66th and Lakeshore Drive); Tues., May 28, 1996, 6:30-9:30, GrnH, StP Campus, Johnson, Vogt

## French (Fren)

(260 Folwell Hall: 624-4308)

French and Italian

### College of Liberal Arts

Textbooks for most Fren courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

(See also History; Humanities; PSch 0741, French for Travelers; and REX 0516, Configuring French Identity: Texts, Images, Institutions)

F.R.P. Akehurst, Professor

Betsy Barnes, Associate Professor

Tom Conley, Professor

Peter Robinson, Associate Professor

Eileen Sivert, Associate Professor

Joseph Waldauer, Professor

Molly Wieland, Assistant Professor

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

Those CLA students who have already studied French are required to take a proficiency exam before enrolling. Contact the Department of French and Italian for details on testing dates (624-4308).

*Beginning French*, Fren 1101-1102-1103 and *Intermediate French*, 1104-1105-1106, 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. In 1106, verbal skills are developed through oral and written analysis of cultural readings and films.

**Read about language laboratories on page 485.**

**Language Help Sessions**—Extension Classes provides language help sessions for students enrolled in beginning (1101-1102-1103) Extension courses in French. In these sessions, tutors are available to assist students with language problems as well as with language practice. (No appointment is necessary.) Times and locations for each help session are announced by the language instructor at the beginning of each quarter.

**Joint Day/Extension Classes**—You may register through Extension for most day school classes scheduled before 4 p.m. in French and Italian. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**Fren 1101-1102-1103 BEGINNING FRENCH.** 5 credits each quarter, tuition\* each quarter: Resident \$397.50; Non-resident \$1152.75. (IS)

Basic listening, speaking, reading and writing skills. Stress on communicative competence. Some cultural readings. (No prereq for 1101; 1101 or 1 year high school French or # for 1102; 1102 or 2 years high school French or # for 1103. Limited to 25)

Fall Qtr, 1101, ★Sec 1, MTh, 6:20-8:25, KoltH S139

Fall Qtr, 1101, ★Sec 2, MTh, 6:20-8:25, AmundH 156

Fall Qtr, 1101, ★Sec 3, MTh, 6:20-8:25, KoltH S133

Winter Qtr, 1102, ★Sec 1, MTh, 6:20-8:25, KoltH S135

Winter Qtr, 1102, ★Sec 2, MTh, 6:20-8:25, KoltH S137

Winter Qtr, 1102, ★Sec 3, MTh, 6:20-8:25, FordH 50, KoltH S136 (Limit 50)

Spring Qtr, 1103, ★Sec 1, MTh, 6:20-8:25, KoltH S136

Spring Qtr, 1103, ★Sec 2, MTh, 6:20-8:25, FordH 60, AmundH 124 (Limit 50)

**Fren 1104 INTERMEDIATE FRENCH.** 5 credits, tuition\*: Resident \$397.50; Non-resident \$1152.75.

Discussion of literary and cultural readings. Grammar review and development of writing skills. (Prereq 1103 or #. Limited to 25)

Fall Qtr, ★Sec 1, MTh, 6:20-8:25, FolH 334

**Fren 1105 INTERMEDIATE FRENCH.** 5 credits, tuition\*: Resident \$397.50; Non-resident \$1152.75.

Cultural and literary readings, progressively less structured discussion leading to free expression of ideas through speaking and writing. (Prereq 1104 or #. Limited to 25)

Winter Qtr, ★Sec 1, MTh, 6:20-8:25, FolH 116

**Fren 1106 INTERMEDIATE FRENCH.** 5 credits, tuition\*: Resident \$397.50; Non-resident \$1152.75.

Continued development of all four language skills. Provides an integrated presentation of contemporary French culture to increase student awareness and understanding of cultural differences. (Prereq 1105. Limited to 25)

Fall Qtr, ★Sec 1, MTh, 6:20-8:25, FordH 70

Spring Qtr, ★Sec 2, MTh, 6:20-8:25, AkerH 317

**Fren 3015 FRENCH COMPOSITION AND COMMUNICATION.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Emphasis on writing, development of communication skills, based on a consolidation of grammar. (Prereq 1106. Limited to 18)

Fall Qtr, ★Sec 1, W, 6:10-9:40, FolH 148

**Fren 3016 ADVANCED FRENCH COMPOSITION AND COMPOSITION.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Builds on Fren 3015 with emphasis on aspects of expression and writing. Reading and discussion with attention to different cultural contexts. (Prereq 3015 or #. Limited to 18)

Winter Qtr, ★Sec 1, W, 6:10-9:40, FolH 426

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**Fren 3017 STYLISTICS THROUGH TRANSLATION.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Organized around various perspectives: the arts, economics, ecology, politics, sociology. (Prereq 3016 or superior achievement in 3015 or #. Limited to 18)

Spring Qtr, Sec 1, W, 6:20-9:30, FolH 334

**Fren 3020 FRENCH COMMUNICATION.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Intensive work in oral expression and listening; comprehension in French incorporating a wide variety of cultural topics. (Prereq 3015. Limited to 18)

Spring Qtr, ★Sec 1, W, 6:10-9:40, FolH 326, Wieland

**FrIt 3604 CINEMAS OF THE REAL.** See French and Italian below.

**FrIt 3608 NEW WAVE CINEMAS.** See French and Italian below.

## Reading French

**Fren 0001 READING FRENCH.** No credit, tuition\*: \$318. (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 a reading examination in French. Students successfully completing the course should obtain the Language Certification form from the Graduate School and present it to the department for signature. **Must be taken S-N.** (No prereq. Limited to 25)

Fall Qtr, ★Sec 1, T, 6:20-8:50, FolH 116

Spring Qtr, ★Sec 2, T, 6:20-8:50, FolH 116

Fren 0001 is also offered as a Summer Extension Class in first 5-week term.

## French and Italian (FrIt)

(260 Folwell Hall: 624-4308)

French and Italian

### College of Liberal Arts

Textbooks for most FrIt courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

Tom Conley, Professor

**Joint Day/Extension Classes**—You may register through Extension for most day school classes scheduled before 4 p.m. in French and Italian. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**FrIt 3604 CINEMAS OF THE REAL.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Film work of major vanguards: surrealism; Vigo, Renoir, Wells, Visconti, Rossellini, DeSica. Course varies in structure. Knowledge of French and Italian helpful but not necessary. (No prereq. A joint Day/Extension class)

Winter Qtr, ○Sec 1, MW, 6:10-8:30, NichH 45, Conley

**FrIt 3608 NEW WAVE CINEMAS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Film work of directors recasting classical traditions of Europe and America. Filmic theories of the Western, B-genre; political cinema; Godard, Resnais, Rivette, Pasolini, Antonioni, Bertolucci. Course varies in structure. Knowledge of French and Italian helpful but not necessary. (No prereq)

Spring Qtr, Sec 1, MW, 6:10-8:30, FolH 116, Conley

## General College (GC)

(140 Appleby Hall: 625-6663)

Textbooks for most GC courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

### General College Faculty

William Adamson, Associate Professor

Fred M. Amram, Professor

Thomas Brothen, Professor

Terence Collins, Professor

Robert C. delMas, Lecturer

James Dilleuth, Teaching Specialist

Victor Fung, Assistant Professor

LeRoy Gardner, Fellow

Jill Gidmark, Professor

David Giese, Professor

Jay Hatch, Associate Professor

Dennis Hower, Professor

Murray S. Jensen, Assistant Professor

Allen Johnson, Associate Professor

Fred Johnson, Associate Professor

Peter Kahn, Assistant Professor

Laura Koch, Associate Professor

Patrick Kroll, Associate Professor

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

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## Course Descriptions

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Sander Latts, Associate Professor  
Patricia Neiman, Associate Counselor Advocate  
Sian Owen-Cruise, Assistant Professor  
Ivan M. Policoff, Associate Professor  
Douglas Robertson, Professor  
Mary K. St. John, Associate Professor  
William Schwabacher, Professor  
Gail Thoen, Assistant Professor  
Kimerly J. Wilcox, Assistant Professor  
Candido Zanoni, Professor  
General College Adjunct Faculty  
Jeff Millikan, Lecturer

### GC Mission

The mission of the General College is to enroll, and prepare for admission to University degree programs, students who require special preparation because of personal circumstances or previous education. Thus the General College provides a strong connection to the University community for students seeking to develop their academic potential. It also provides an environment for a diverse population of students, faculty, and staff and seeks to encourage multicultural perspectives in its activities.

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in General College. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

### General College Categories

#### Humanities, Literature, and the Arts

- 1331 Musical Heritage
- 1365 Literatures of the United States
- 1366 Women's Literature
- 1371 Literature: Reading Short Stories
- 1374 The Movies: An Introductory Course
- 1485 Creativity: Photography I
- 1816 African-American Literature

#### Social Sciences, Law, and Business

- 1211 People and Problems
- 1233 United States: Government and Politics
- 1235 United States: Law in Society
- 1236 The United States Crime Problem
- 1281 Psychology in Modern Society
- 1283 Psychology of Human Development

- 1284 Behavior Problems of Children 1211
- 1285 Cultural Anthropology
- 1511 Introduction to Business
- 1513 Small Business Operations
- 1534 Practical Law
- 1540 Accounting Fundamentals I
- 1721 Marriage, Family, and Personal Fulfillment
- 1733 Contemporary Sex Roles
- 1851 Multicultural Relations

### Communication Skills

- 1421 Writing Laboratory: Basic Writing
- 1422 Writing Laboratory: Communicating in Society
- 1461 Oral Communication: Speaking and Creative Thinking
- 1464 Oral Communication: Group Process and Discussion

### Mathematics, Mathematical Thinking, and Computing

- 0621 Elementary Algebra
- 0623 Plane Geometry: Programmed Study
- 0625 Intermediate Algebra, Part I
- 0631 Intermediate Algebra, Part II
- 0643 Basic Mathematics: Programmed Study
- 1454 Statistics
- 1456 Functions and Problems of Logic
- 1571 Introduction to Microcomputer Applications
- 1572 Introduction to Computer Programming
- 1575 Introduction to Computers

### Personal Development

- 1076 Career Planning

### Natural Science

- 1111 Science in Context: Weather and Climate
- 1112 Ecological Evaluation of Environmental Problems
- 1132 Biological Science: The Human Body
- 1133 Nature Study
- 1161 Physical Science: Solar System Astronomy
- 1162 Physical Science: Stellar Astronomy
- 1163 Physical Science: Principles of Physics
- 1166 Physical Science: Principles of Chemistry

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★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



## General College Course Descriptions

(Listed in numerical order)

**Continuing Education for Women (CEW) section available in the following course:** GC 1511

### Preparatory Mathematics Program

Choosing the first mathematics class in college is difficult but very important. Students want to minimize the number of preparatory mathematics classes that they must take while at the same time maximizing their opportunity for success. Experience indicates that students choose an inappropriate advanced class more often than they choose a more elementary class. Be careful in your choice because your success in a mathematics class will depend, at least in part, on whether or not you have the appropriate background for the class.

It is to your advantage to take a placement test (see below) before registering for a mathematics course. Even if you have recently completed a math course, you should still take a test to see what you know and understand today. Like other languages, mathematics is hierarchical: calculus assumes that you know algebra, and algebra assumes that you know arithmetic. If you have not worked with mathematics for some time, you may be surprised to find out how much you have forgotten. Also, you may be surprised to find that the level of sophistication of a "precalculus" course at the University is quite a bit higher than a "precalculus" course in high school. The names may be the same, but the level of complexity and abstraction may be quite different.

In general, students with substantial knowledge in algebra (including factoring, radicals, and complex numbers) should be able to register for GC 0631, Intermediate Algebra, Part II, while students with some background in elementary algebra (including signed numbers, polynomials, and equations) will want to try GC 0625, Intermediate Algebra, Part I. Students with good background in fractions, decimals, and percents should register for GC 0621, Elementary Algebra, while students who lack background in arithmetic should try GC 0643. GC 0643 is also the appropriate beginning course for anyone who has a fear of mathematics or needs to proceed at a pace different from that of other students. With the aid of an instructor, a student in GC 0643 is able to progress through arithmetic or introductory algebra at a pace more suited to his or her learning style.

### GC/CEE Mathematics Placement Testing

Placement tests may be taken prior to registration in GC mathematics courses and are highly recommended for those students who are uncertain about which mathematics course would be best for them to start with. The GC/CEE mathematics placement examination may be taken through the General College Mathematics Learning and Assessment Center (MLAC), 9 Appleby Hall. This service is offered free of charge.

**Testing schedule (appointments are not needed in advance to take tests):** Tests may be taken throughout the year during regular MLAC hours when GC classes are in session. Contact GC Central at (612) 625-6663 to find out the current quarter's hours for the MLAC. Prior to fall quarter, the test will be given at 6 p.m. on the following dates: *Monday, August 7; Tuesday, August 15; Tuesday, September 5; and Monday, September 11.* Placement tests also may be taken 11 a.m. to 1 p.m., Monday through Friday, September 5 to 15, 1995.

Test scores and enrollment recommendations will be provided as soon as possible—frequently on the same day as tests are taken.

After the term begins, the Mathematics Learning and Assessment Center provides tutorial assistance, and placement testing in mathematics for those unable to attend the above scheduled sessions. These services are available to students registered in any of the General College preparatory mathematics courses.

*See also math courses in Practical Scholar non-credit section.*

**GC 0621 ELEMENTARY ALGEBRA.** No credit, tuition\*: \$397.50. (IS)

For students with strong background in arithmetic. Sets, properties, signed numbers, equations, word problems, inequalities, graphing, polynomials, factoring, rational expressions and radicals. (Prereq GC math placement or GC 0611 or GC 0615. Limited to 30)

Fall Qtr, ★Sec 1, MW, 6-8:15, ApH 319

Winter Qtr, ★Sec 2, MW, 6-8:15, NichH 209

Spring Qtr, ★Sec 3, MW, 6-8:15, ApH 319

(See also PSch 0652, Elementary Algebra)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

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## Course Descriptions

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**GC 0623 PLANE GEOMETRY.** No credit, tuition\*: \$318. (IS)

Elements of plane geometry with some geometry of solids equivalent to one year of high school geometry. Logic, sets, systems of measurement, geometric figures, geometric relationships, area, volume, concurrence, constructions. Course is programmed instruction with lecture notes provided by instructor. (Prereq GC math placement or elementary algebra, #. Entrance requirement for College of Liberal Arts and Institute of Technology. Meets concurrently with GC 0643. Limited to 15)

Fall Qtr, ★Sec 1, W, 5-8 (plus 1 hr arr), ApH 11, Koch

Winter Qtr, ★Sec 2, W, 5-8 (plus 1 hr arr), ApH 11, Koch

Spring Qtr, ★Sec 3, W, 5-8 (plus 1 hr arr), ApH 11, Koch

**GC 0625 INTERMEDIATE ALGEBRA, Part I.** No credit, tuition\*: \$397.50. (IS)

For students with adequate background in elementary algebra. Sets, real numbers, linear equations, linear inequalities, absolute value equations and inequalities, exponents, polynomials, systems of equations, word problems, rational expressions, roots and radicals. *Sec. 1 only is computer-assisted instruction.* (Prereq GC math placement or elementary algebra with grade of C or better. Limited to 30)

Fall Qtr, ★Sec 1, MW, 6-8:15, ApH 117, Giese

Winter Qtr, ★Sec 2, MW, 6-8:15, ApH 319

Spring Qtr, ★Sec 3, MW, 6-8:15, NichH 209A

**GC 0631 INTERMEDIATE ALGEBRA, Part II.** No credit, tuition\*: \$397.50. (IS)

*Good knowledge of linear and quadratic equations and inequalities, exponents, factoring, rational expressions, roots, radicals, and graphing assumed.*

Topics include complex numbers, quadratic equations, matrix solutions to systems of equations, general inequalities, conic sections, functions, logarithmic and exponential functions, sequences, series, and binomial theorem. *Sec. 2 and 3 only are computer-assisted instruction.* (Prereq GC math placement or GC 0625 with grade of C or better. Limited to 30)

Fall Qtr, ★Sec 1, MW, 6-8:15, NichH 209A

Winter Qtr, ★Sec 2, MW, 6-8:15, ApH 117, Giese

Spring Qtr, ★Sec 3, MW, 6-8:15, ApH 117, Giese

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**GC 0643 MATHEMATICS: PROGRAMMED STUDY.** No credit, tuition\*: \$318.

With aid of instructor, topics selected from whole numbers, fractions, decimals, percents, signed numbers, formulas, graphs, ratio and proportion, sets, properties, equations, inequalities, rectangular graphs, polynomials, factoring, rational expressions, conic sections, functions, logarithms. Course is programmed instruction with lecture notes provided by instructor. (Prereq #. Meets concurrently with GC 0623. Limited to 15)

Fall Qtr, ★Sec 1, W, 5-8 (plus 1 hr arr), ApH 11, Koch

Winter Qtr, ★Sec 2, W, 5-8 (plus 1 hr arr), ApH 11, Koch

Spring Qtr, ★Sec 3, W, 5-8 (plus 1 hr arr), ApH 11, Koch

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**GC 1076 CAREER PLANNING.** 2 credits, \$1502, tuition\*: Resident \$159; Non-resident \$461.10.

Career workshop to assess students' interests, abilities, needs, values, and personality through testing and subjective self-exploration. Occupational information provided through computerized system and other printed materials. For students who need to confirm a tentative career choice. (No prereq. Limited to 20)

Fall Qtr, ★Sec 1, T, 5:30-7:30, ApH 102, Neiman

(See also PSch 0665, Career Decisions: Strategies for Change)

**GC 1111 SCIENCE IN CONTEXT: WEATHER AND CLIMATE.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Day-to-day and long-range weather patterns in terms of interactions among atmosphere, oceans, land surfaces, and earth motions. Storms, seasonal change, climatic change, fair weather, air pollution, and distribution of moisture and energy considered from theoretical as well as applied standpoints. Basic principles of science applied to analyzing and forecasting weather, interpreting climates and climatic change, and realizing the great extent to which individuals interact with the atmospheric environment. (No prereq. Limited to 30)

Fall Qtr, ★Sec 1, W, 5:30-8:30, Roseville Area HS 244, A Johnson

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★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**GC 1112 ECOLOGICAL EVALUATION OF ENVIRONMENTAL PROBLEMS.** 4 credits, §1113, tuition\*: Resident \$318; Non-resident \$922.20.

Concepts of ecology (organization of ecosystems, material cycling, energy flow and production, population dynamics, and community interactions) needed to understand proximate and ultimate causes of environmental problems such as world hunger, endangered species, deforestation, solid and hazardous wastes, global climate change, acid rain, and cultural eutrophication. Frameworks and methodologies for critically evaluating impacts and proposing interventions. (No prereq. Limited to 35)  
 Winter Qtr, ★Sec 1, Th, 5:30-8:30, ApH 303, Hatch

(See also EEB 3001, Introduction to Ecology; Interdepartmental Study; and CSch 0500, Biodiversity: What Is It and Why Is It Important?)

**GC 1132 BIOLOGICAL SCIENCE: THE HUMANBODY.** 5 credits, tuition\*: Resident \$397.50; Non-resident \$1152.75.

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. Limited to 35)

Fall Qtr, ★Sec 1, MW, 5-7:15, ApH 303, Jensen  
 Winter Qtr, ★Sec 2, MW, 5-7:15, ApH 303, Wilcox  
 Spring Qtr, ★Sec 3, MW, 5-7:15, ApH 303

(See also Biology; and GC 1134, Cardiovascular Anatomy and Physiology)

**GC 1133 NATURE STUDY.** 4 credits, tuition\* (includes \$25 course fee): Resident \$343; Non-resident \$947.20.

General natural history for students with little or no prior training in biology. Common Minnesota plants and animals examined in the field from the viewpoint of the informed amateur naturalist. Natural habitat associations; field observation and identification techniques. (No prereq. Limited to 20)

Spring Qtr, ★Sec 1, W, 6-9, ApH 311, Hatch

(See also *Natural and Physical Sciences* in Compleat Scholar noncredit section)

**GC 1161 PHYSICAL SCIENCE: SOLAR SYSTEM ASTRONOMY.** 5 credits, tuition\*: Resident \$397.50; Non-resident \$1152.75. (IS)

Introductory survey of solar system: planets, satellites, asteroids, comets, meteorites. Celestial sphere, coordinate systems, time intervals, motion, physical attributes of various members of our solar system; space program findings. Opportunity to observe through University telescope. Four one-hour evening laboratories or independent study project arranged. (No prereq. Limited to 35)

Winter Qtr, ★Sec 1, M, 5:30-9, Phys 131, Policoff

**GC 1162 PHYSICAL SCIENCE: STELLAR ASTRONOMY.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20. (IS)

Introductory study of large-scale structure of universe. Definition and measurement of certain properties of stars: magnitude, distance, temperature, size. Spectral classification of stars, nebulae, pulsars, black holes, galaxies, quasars; theories of relativity, cosmology, cosmogony. Opportunity to observe through University telescope. Four one-hour evening laboratories or independent study project arranged. (No prereq. Limited to 35)

Fall Qtr, ★Sec 1, M, 6-9, Phys 131, Policoff

**GC 1163 PHYSICAL SCIENCE: PRINCIPLES OF PHYSICS.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Basic physical principles; aspects of mechanics, electricity, magnetism, sound. Lectures, discussion, lecture experiments, demonstrations; no separate laboratory. Problem-solving geared to students' varying mathematical backgrounds; individual outside help available. (Prereq elementary algebra or 0621 or GC math level D. Limited to 35)

Spring Qtr, ★Sec 1, T, 6-9, Phys 131, Schwabacher

(See also CSch 0560, Quarks to Quasars: An Overview of 20th-Century Physics)

**GC 1166 PHYSICAL SCIENCE: PRINCIPLES OF CHEMISTRY.** 5 credits, tuition\*: Resident \$397.50; Non-resident \$1152.75. (IS)

Fundamental principles and laws of chemistry; theory, development, application, roots in experience. Problem-solving techniques. Topics include classification of matter, elements, atomic and molecular structure, compounds and chemical bonding, chemical reactions and stoichiometry, gas laws. No separate laboratory. (No prereq. Limited to 50)

Fall Qtr, ★Sec 1, TTh, 6-9, SciCB 125, Schwabacher

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**GC 1211 PEOPLE AND PROBLEMS.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Interdisciplinary, cross-cultural study of major political and economic problems of human society. Problems such as unemployment, inflation, energy, pollution, war, and distribution of power examined from social sciences perspective. (No prereq. Limited to 24)

Fall Qtr, ★Sec 1, T, 6-9, ApH 303, Thoen

**GC 1233 UNITED STATES: GOVERNMENT AND POLITICS.** 5 credits, tuition\*: Resident \$397.50; Non-resident \$1152.75.

Major institutions of American national government and politics examined in context of their recent social-historical development. Becoming a well-informed and active citizen encouraged through participant-observer field assignment and required reading of daily newspaper. (No prereq. Limited to 24)

Winter Qtr, ★Sec 1, T, 6-9, ApH 303, Kahn

**GC 1235 UNITED STATES: LAW IN SOCIETY.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20. (IS)

The role of law in our changing society; legal aspects of current topics. Topics include: court and court systems, corrections, police-community relations, environmental problems, domestic problems, wills and probate, and insurance. When possible on individual or group basis, students visit conciliation, municipal, or district courts, prisons, workhouses, jails, juvenile detention centers, or similar institutions. (No prereq. Limited to 24)

Fall Qtr, ★Sec 1, W, 5-8, ApH 226, Hower

Spring Qtr, ★Sec 2, T, 6-9, ApH 303, Kahn

(See also CSch 0302, American Civil Liberties: History and Recent Court Decisions)

**GC 1236 THE UNITED STATES CRIME PROBLEM.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

A study of the complex nature and causes of crime in the United States. Case examples of violent crime, individual white-collar crime, corporate crime and organized crimes are examined utilizing concepts drawn from several academic disciplines. Current and proposed public policies designed to reform the criminal justice system and alleviate the crime problem also are evaluated. (No prereq. Limited to 35)

Winter Qtr, ★Sec 1, M, 5-8, ApH 103, F Johnson

**GC 1281 PSYCHOLOGY IN MODERN SOCIETY.** 5 credits, tuition\*: Resident \$397.50; Non-resident \$1152.75.

Introduction to science of human behavior. Topics include analysis of research methods used in observing and drawing conclusions about behavior, development of behavior, human biological and social motives, place of emotion and conflict in human adjustment, how the individual perceives the environment and learns from it, and psychology of behavior in groups. *Lab is optional and starts the second week of class.* (No prereq. Limited to 40)

Fall Qtr, ★Sec 1, Lect M, 6-9, ApH 128; Lab M, 5-6, Brothen

Spring Qtr, ★Sec 2, Lect W, 6-9, ApH 128; Lab W, 5-6, Brothen

**GC 1283 PSYCHOLOGY OF HUMAN DEVELOPMENT.** 5 credits, tuition\*: Resident \$397.50; Non-resident \$1152.75. (IS)

Focuses on growth and development of individual from conception through old age. Physical, motor, social, emotional, and psychological growth, and cognitive development. Integrated view of facets of development in order to understand human being as a complex organism functioning in a complex environment. The family as the main environmental factor in early development of individual. (No prereq. Limited to 30)

Fall Qtr, ★Sec 1, Th, 5-9, ApH 103, Latts

Winter Qtr, ★Sec 2, T, 5-9, ApH 103, Latts

Winter Qtr, ★Sec 3, Th, 5-9, ApH 103, Latts

**GC 1284 BEHAVIOR PROBLEMS OF CHILDREN.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20. (IS)

Identification of maladaptive behavior/coping with children demonstrating such behavior. Dynamics of behavior seen at home, in schools, and in social relationships. Examines effects of heredity, family experience, peer pressure, and socioeconomic class on development of behavior problems in children. (No prereq. Limited to 30)

Spring Qtr, ★Sec 1, Th, 6-9, ApH 303, Latts

**GC 1285 CULTURAL ANTHROPOLOGY.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Human culture viewed as integrated system of learned and shared knowledge that guides behavior of all members of given society. Attempt to develop generalizations about influence of culture on human behavior by analyzing and comparing ways of life in wide range of cultures. Power of culture to shape personality and power of individuals to alter cultures. (No prereq. Limited to 30)

Fall Qtr, ★Sec 1, M, 5-8, ApH 103, F Johnson

Spring Qtr, ★Sec 2, T, 5-8, ApH 103, F Johnson

(See also Anthropology)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**GC 1331 MUSICAL HERITAGE.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Concepts of music that may vary among different cultures. African, Asian, European, North American, and South American musics emphasized. Indigenous musical cultures and their values in the United States. (No prereq. Limited to 35)

Winter Qtr, ★Sec 1, T, 5-8:30, ApH 302, Fung

(See also music courses in Compleat Scholar non-credit section)

**GC 1365 LITERATURES OF THE UNITED STATES.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20. (IS)

Ideals, values, and aspirations recorded by writers in the United States. Development of the democratic idea, emerging social problems, and great variety of people who participated in shaping the United States and issues that concerned them. Covers fiction, poetry, drama, essay, and biography. (No prereq. Limited to 35)

Winter Qtr, ★Sec 1, M, 5:30-8:30, ApH 302, Gidmark

**GC 1366 LITERATURE: IMAGES OF WOMEN IN LITERATURE.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Images of women (such as submissive wife, sex object, woman alone, and liberated woman) as presented in short fiction, drama, and poetry, and occasionally in advertising, movies, and television. Problems and concerns of women as writers, as expressed in diaries and essays of such writers as Virginia Woolf and Tillie Olson. (No prereq. Limited to 35)

Fall Qtr, ★Sec 1, M, 5:30-8:30, ApH 302, Gidmark

(See also CSch 0416, Reading and Writing Women's Autobiography)

**GC 1371 LITERATURE: READING SHORT STORIES.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20. (IS)

Representative short stories by American, British, and continental writers. How individual writers have used the form of the short story to express their ideas about human experience. (No prereq. Limited to 35)

Spring Qtr, ★Sec 1, M, 5:30-8:30, ApH 302, Gidmark

**GC 1374 THE MOVIES: AN INTRODUCTORY COURSE.** 4 credits, tuition\* (includes \$10 course fee): Resident \$328; Non-resident \$932.20.

Films as art forms and as communication media. Students view films in class, may read film scripts, and may attend film showings locally to learn how to analyze films and to recognize their unique characteristics. (No prereq. Limited to 30)

Fall Qtr, ★Sec 1, T, 5-8:30, ApH 302, Adamson  
Winter Qtr, ★Sec 2, W, 5-8:30, ApH 302, Adamson  
Spring Qtr, ★Sec 3, Th, 5-8:30, ApH 302, Adamson

### Writing Laboratories

*GC 1421 and GC 1422 (with a grade of C+ or better in GC 1422) will satisfy the College of Liberal Arts lower division Writing Practice requirement for General College students. For additional information, call CEE Counseling, 625-2500. Students in other colleges at the University should seek further information in the Composition section of this bulletin.*

**GC 1421 WRITING LABORATORY: BASIC WRITING.** 4 credits, tuition\* (includes \$10 course fee): Resident \$328; Non-resident \$932.20.

Students write on various topics in response to reading and discussion. Personal help with individual writing problems. Emphasis is on clear and effective written expression through extensive writing and revision. Microcomputer instruction; uses IBM PC. (No prereq. Limited to 18)

Fall Qtr, ★Sec 1, M, 5-8, ApH 204, Collins

Winter Qtr, ★Sec 2, T, 5-8, ApH 204

Spring Qtr, ★Sec 3, T, 5-8, ApH 204

**GC 1422 WRITING LABORATORY: COMMUNICATING IN SOCIETY.** 4 credits, \$1423, tuition\*: Resident \$318; Non-resident \$922.20.

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. Extensive writing practice. Microcomputer instruction; uses IBM PC. (Prereq 1421 or #. Limited to 18)

Winter Qtr, ★Sec 1, M, 5-8, ApH 204, Collins

Spring Qtr, ★Sec 2, M, 5-8, ApH 204, Collins

**GC 1454 STATISTICS.** 5 credits, tuition\*: Resident \$397.50; Non-resident \$1152.75. (IS)

Introduction to modern statistics, emphasizing problem solving and hands-on experience with real data. Topics include data exploration, summary statistics, sampling, probability, distributions, estimation, and hypothesis testing. (Prereq GC math level D or elementary algebra. Limited to 25)

Fall Qtr, ★Sec 1, TTh, 5-7:15, ApH 219, delMas

Winter Qtr, ★Sec 2, TTh, 5-7:15, ApH 219, delMas

Spring Qtr, ★Sec 3, TTh, 5-7:15, ApH 219, Giese

(See also PSch 0660, Taking the Sting Out of Stats: Preparing for Graduate Statistics)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**GC 1456 FUNCTIONS AND PROBLEMS OF LOGIC.** 4 credits, §1442, tuition\*: Resident \$318; Non-resident \$922.20.

Introduction to logical thinking. Students apply critical analysis and techniques of precise reasoning to various types of discourse and argument, and develop habits of systematic thinking by learning about complexities of language, differences between good and bad evidence, and methods of deductive and inductive reasoning. (No prereq. Limited to 24)

Fall Qtr, ★Sec 1, M, 5:30-8:30, ApH 226, Zanon  
Winter Qtr, ★Sec 2, M, 5:30-8:30, ApH 102  
Spring Qtr, ★Sec 3, M, 5:30-8:30, ApH 103, Zanon

**GC 1461 ORAL COMMUNICATION: SPEAKING AND CREATIVE THINKING.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

In conversations, discussions, and prepared speeches, students share ideas, attitudes, and experiences with others; examine how language functions as means of communication. Modes and methods of creative thinking are explored in relation to effective oral communication. Students listen and respond to communication of others and comment on what they see, hear, and feel. (No prereq. Limited to 24)

Fall Qtr, ★Sec 1, W, 6-9, ApH 102

(See also PSch 0841, Man Talk, Woman Talk: Bridging the Gender Communication Gap)

**GC 1464 ORAL COMMUNICATION: GROUP PROCESS AND DISCUSSION.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Nature of groups, how they form and function, what purpose they serve in our society, and how leadership and other role behaviors emerge. Diverse group projects and activities. Skills and theory especially adapted for the professional setting. (No prereq. Limited to 20)

Fall Qtr, ★Sec 1, M, 5-8, ApH 102, Amram  
Winter Qtr, ★Sec 2, W, 5-8, ApH 102, Amram  
Winter Qtr, ★Sec 3, Th, 5-8, ApH 102, Amram  
Spring Qtr, ★Sec 4, M, 5-8, ApH 102

**GC 1485 CREATIVITY: PHOTOGRAPHY I.** 4 credits, tuition\* (includes \$30 special fee): Resident \$348; Non-resident \$952.20.

Instruction in use of cameras, basic optics, film and paper emulsions, and similar topics. Work with basic darkroom techniques, film developing, and paper printing. Books available at the bookstore in Williamson Hall (625-6000). Students must have a

camera; a 35mm camera is preferred, although not required. (No prereq. Limited to 24).

Fall Qtr, ★Sec 1, W, 6-9:45, MacP 31, Millikan  
Winter Qtr, ★Sec 2, W, 6-9:45, MacP 31, Millikan  
Spring Qtr, ★Sec 3, W, 6-9:45, MacP 31, Millikan

(See also Compleat Scholar photography courses, page 415)

**GC 1511 INTRODUCTION TO BUSINESS AND SOCIETY.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20. (IS)

Overview of business in economic and social life of U.S. Topics include economics, marketing, management, finance, law, international business. Recurring themes of ethics, environmentalism, consumerism, cultural diversity. Students develop awareness of their role as consumer, worker, citizen. (No prereq. Limited to 35)

Spring Qtr, ★Sec 1, Th, 9 a.m.-12, MacP, St. John. Offered through Continuing Education for Women

**GC 1513 SMALL BUSINESS OPERATIONS.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20. (IS)

Students evaluate opportunities to start a small business or to purchase an existing one. Topics include financing the business; marketing products; administering key resources; organizing, controlling, and writing the business plan. Designed for people who plan to own or operate a small business in a marketing-related area. (No prereq. Limited to 35)

Fall Qtr, ★Sec 1, Th, 6-9, ApH 303, Kroll  
Winter Qtr, ★Sec 2, T, 6-9, ApH 226, Kroll

**GC 1534 PRACTICAL LAW.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20. (IS)

Practical topics in field of law. Topics include: definition and sources of law, formation and discharge of contracts, torts (personal injury and property damage suits), criminal law, bailments, nature and classification of real and personal property, and joint ownership and tenancy. (No prereq. Limited to 35)

Fall Qtr, ★Sec 1, W, 6-9, ApH 302, Kahn

(See also Business Law; and Soc 3102, Introduction to Criminal Behavior and Social Control)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**GC 1540 ACCOUNTING FUNDAMENTALS I.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20. (IS)

Designed for those who plan continued study in accounting as well as for those interested in other business fields. Balance sheet and income statement methodology, the accounting cycle for both service and merchandising businesses, and an examination of special journals, inventories, receivables, and accounting for plant and equipment. Both lecture and class discussion; regular homework assignments. Midterm and final examinations. (No prereq. Limited to 25)

Spring Qtr, ★Sec 1, Th, 6-9, ApH 226, Kroll

**GC 1571 INTRODUCTION TO MICROCOMPUTER APPLICATIONS.** 5 credits, tuition\* (includes \$10 course fee): Resident \$407.50; Non-resident \$1162.75. (IS)

Self-paced course covering operating system (DOS), word processing (WordPerfect), spreadsheet (Lotus clone), and data base (dBASE III) applications. Emphasis on using microcomputers in practical ways. Course work may be done on classroom microcomputers or on student's own IBM-compatible microcomputer. (Prereq 0621 or elementary algebra. Meets concurrently with 1572. Limited to a combined total of 20)

Fall Qtr, ★Sec 1, T, 5-9:10, ApH 117, Robertson

Fall Qtr, ★Sec 2, W, 5-9:10, ApH 321, Robertson

Winter Qtr, ★Sec 3, T, 5-9:10, ApH 117, Robertson

Winter Qtr, ★Sec 4, W, 5-9:10, ApH 321, Robertson

Spring Qtr, ★Sec 5, T, 5-9:10, ApH 117, Robertson

Spring Qtr, ★Sec 6, W, 5-9:10, ApH 321, Robertson

**GC 1572 INTRODUCTION TO COMPUTER PROGRAMMING.** 5 credits, \$3571, tuition\* (includes \$10 course fee): Resident \$407.50; Non-resident \$1162.75. (IS)

Self-paced course where students design, write, code, and run BASIC programs. Emphasis on writing structured programs for social sciences. Provides excellent background for further programming courses. Course work may be done on classroom microcomputers or student's own IBM-compatible microcomputer. (Prereq GC 1571 or IBM microcomputer experience. Meets concurrently with 1571. Limited to a combined total of 20)

Fall Qtr, ★Sec 1, W, 5-9:10, ApH 321, Robertson

Winter Qtr, ★Sec 2, W, 5-9:10, ApH 321, Robertson

Spring Qtr, ★Sec 3, W, 5-9:10, ApH 321, Robertson

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**GC 1575 (formerly 1535) INTRODUCTION TO COMPUTERS.** 4 credits, \$1535, tuition\* (includes \$10 course fee): Resident \$328; Non-resident \$932.20.

Emphasis is placed on developing computer literacy. Topics include historical development, hardware (input/output, memory, central processor), operating systems, data base management, system development, economic and social impact, and applications in various disciplines. (Prereq 0621 or elementary algebra. Limited to 25)

Spring Qtr, ★Sec 1, T, 6-9, ApH 128, Dillemath

**GC 1721 MARRIAGE, FAMILY, AND PERSONAL FULFILLMENT.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Psychological, social, and biological aspects of marriage and family living. Helping students gain understanding of, and self-awareness concerning, such areas as dating, mate selection, getting married, having children, and sexuality. Adjustments outside of traditional marital and family relationships. (No prereq. Limited to 24)

Winter Qtr, ★Sec 1, W, 6-9, ApH 226, Thoen

**GC 1733 CONTEMPORARY SEX ROLES.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Social roles and related expectations, informal and formal roles, role modification, and role reversal. Overcoming sexual stereotyping. Focus on analyzing the openness and rigidity of sex roles in childhood socialization; education; mate selection; marital, parental, and homemaking roles; occupations; and social trends. (No prereq. Limited to 24)

Spring Qtr, ★Sec 1, M, 6-9, ApH 226, Thoen

(See also PSch 0840, Identity and Intimacy in Close Relationships)

**GC 1816 AFRICAN-AMERICAN LITERATURE.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20. (IS)

Students read and evaluate poetry, drama, folklore, short stories, and an African-American novel; through literature, students assess artists' own perceptions and interpretations of outlook, feelings, and psychological makeup of blacks in America. (No prereq. Limited to 24)

Fall Qtr, ★Sec 1, T, 5:30-8:30, ApH 226

## Course Descriptions

**GC 1851 MULTICULTURAL RELATIONS.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Immigration/migration experiences of Asians, blacks, "old" and "new" European immigrants, Hispanics, Indians, and some less prominent groups in building new lives in the United States. Intercultural, interethnic, interracial relationships, and cross-gender relationships are explored from cultural pluralistic perspective. (No prereq. Limited to 35) Spring Qtr, ★Sec 1, T, 5-8:30, ApH 226, Gardner

### Genetics and Cell Biology (GCB)

(250 Biological Science: 624-3003)

#### College of Biological Sciences

Textbooks for GCB courses on the Minneapolis campus are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000); at University of Minnesota Bookstore—St. Paul (624-9200) for classes on that campus.

Robert Brooker, Associate Professor  
Robert McKinnell, Professor

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Genetics and Cell Biology. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**GCB 3002 HUMAN GENETICS, SOCIAL AFFAIRS.** 3 credits, §3022, §Biol 1101, §Biol 5003; 4 credits with term paper. Tuition\* each credit: Resident \$93.50; Non-resident \$271.15.

For students in programs not directly related to biological sciences. Heredity and basic genetic mechanisms with an emphasis on humans. Relationship between human genetics and disease, family planning, gender, behavior, and race. Ethical/societal issues concerning human genetics and modern genetic technologies. (No prereq)

Winter Qtr, Sec 1, W, 6:20-8:50, FordH 115,  
Brooker

**GCB 3008 THE BIOLOGY OF CANCER.** 3 credits, §Nurs 5881, tuition\*: Resident \$280.50; Non-resident \$813.45.

Biological aspects of etiology, phylogeny, and cellular processes involved in neoplasia. Growth and differentiation of normal and cancer cells. The history of cancer research. (Prereq Biol 1009 or 1202. Meets concurrently with Nurs 5881)

Spring Qtr, Sec 1, W, 6:30-9, BioSci 12, StP Campus, McKinnell

**GCB 3022 GENETICS.** 4 credits, §Biol 5003, tuition\*: Resident \$374; Non-resident \$1084.60. (IS)

Not intended for biology majors. Mechanisms of heredity, their implications for biological populations and applications to practical problems. (Prereq Biol 1009 or 1202. A joint Day/Extension class) Winter Qtr, ○Sec 1, TTh, 5:30-7:10, ClaOff B45, StP Campus

(See also Biology and Biochemistry)

### Geo-Engineering (GeoE)

(See Civil Engineering)

### Geography (Geog)

(414 Social Sciences: 625-6080)

#### College of Liberal Arts

Textbooks for most Geog courses are available at University of Minnesota Bookstore—West Bank (625-3000).

(See also General College)

John S. Adams, Professor  
Donald G. Baker, Professor of Soil Science  
Ward J. Barrett, Professor  
John R. Borchert, Regents' Professor Emeritus  
Dwight A. Brown, Professor  
Philip J. Gersmehl, Professor  
John Fraser Hart, Professor  
Mei-Ling Hsu, Professor  
Katherine M. Klink, Assistant Professor  
Helga Leitner, Associate Professor  
Fred E. Lukermann, Professor Emeritus  
Judith A. Martin, Associate Professor  
Robert B. McMaster, Associate Professor  
Roger P. Miller, Associate Professor  
Philip W. Porter, Professor  
John G. Rice, Professor  
Abdi I. Samatar, Associate Professor  
Joseph E. Schwartzberg, Professor  
Earl P. Scott, Professor  
Eric S. Sheppard, Professor  
Richard H. Skaggs, Professor  
Roderick H. Squires, Associate Professor  
Connie H. Weil, Associate Professor

**Joint Day/Extension Classes**—You may register through Extension for most day school classes scheduled before 4 p.m. in Geography. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



**For information on completing a major in Geography, contact either CEE Counseling (625-2500) or the Geography Undergraduate Advising Office (625-0133).**

**Geog 1301 HUMAN GEOGRAPHY.** 5 credits, §1302, tuition\*: Resident \$397.50; Non-resident \$1152.75.

Geography of population and principal ways of life; capacity of earth for future population. (No prereq) Spring Qtr, Sec 1, Lect W, 6:30-9, BlegH 415; Rec Th, 6:30-8, BlegH 445, Miller

**Geog 1425 INTRODUCTION TO METEOROLOGY.** 4 credits, §Soil 1262, tuition\*: Resident \$318; Non-resident \$922.20.

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. A joint Day/Extension class limited to 5 Extension students)

Fall Qtr, ★●Sec 1, Lect T, 6:20-9, AndH 350; Rec TTh, 9:05-9:55 a.m., BlegH 445, Baker, Klink, Skaggs

Fall Qtr, ★●Sec 2, Lect T, 6:20-9, AndH 350; Rec W, 6:20-8, BlegH 445, Baker, Klink, Skaggs

**Geog 1973 GEOGRAPHY OF THE TWIN CITIES.** 4 credits, §3973, tuition\*: Resident \$318; Non-resident \$922.20.

Social and physical characteristics of the Twin Cities. Their place in the urban network of the United States. (No prereq. Meets concurrently with 3973. A joint Day/Extension class)

Winter Qtr, ●Sec 1, W, 6:20-9, AndH 210, Adams

(See also walking tour of Minneapolis in Compleat Scholar noncredit section, page 428)

**Geog 3181 RUSSIA AND ENVIRONS.** 4 credits, §5181, tuition\*: Resident \$344; Non-resident \$997.60. (IS)

Physical and human geography of republics of the former USSR. Imprint of central planning and state socialism on regional economies, city systems, and internal structures of cities. Economic and cultural linkages among regions and republics. Conflicts rooted in religion, ethnicity, and tradition. Contacts with neighboring states and regions. Physical environmental problems. (No prereq. Meets concurrently with 5181. A joint Day/Extension class)

Spring Qtr, ●Sec 1, TTh, 6-8, BlegH 415, Adams

**Geog 3973 GEOGRAPHY OF THE TWIN CITIES.** 4 credits, §1973, tuition\*: Resident \$344; Non-resident \$997.60.

See 1973 for description. (No prereq. Meets concurrently with 1973. A joint Day/Extension class) Winter Qtr, ●Sec 1, W, 6:20-9, AndH 210, Adams

**Geog 5181 RUSSIA AND ENVIRONS.** 4 credits, §3181, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

See Geog 3181 for course description. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3181. A joint Day/Extension class)

Spring Qtr, ●Sec 1, TTh, 6-8, BlegH 415, Adams

**Geog 5562 INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS.** 4 credits, §LA 5562, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Basic concepts of geographic information systems structure. Theory and application for geographic research, location and resource analysis, and regional planning. Location principles, data structure, variable attributes. (Prereq jr or sr geography major or grad or landscape architecture major or #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with LA 5562. A joint Day/Extension class limited to a combined total of 3 Extension students)

Winter Qtr, ★●Sec 1, Lect T, 6:30-9, AndH 230; Rec T, 2:30-4:30, BlegH 455, McMaster

Winter Qtr, ★●Sec 2, Lect T, 6:30-9, AndH 230; Rec W, 11:15 a.m.-1:10, BlegH 455, McMaster

Winter Qtr, ★●Sec 3, Lect T, 6:30-9, AndH 230; Rec W, 6:30-8:30, BlegH 455, McMaster

Winter Qtr, ★●Sec 4, Lect T, 6:30-9, AndH 230; Rec Th, 2:30-4:30, BlegH 455, McMaster

Winter Qtr, ★●Sec 5, Lect T, 6:30-9, AndH 230; Rec Th, 6:30-8:30, BlegH 455, McMaster

(See also REX 0504, Historical Atlas of the St. Paul Central Business District)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Geog 8800 SEMINAR: DEVELOPMENT OF GEOGRAPHIC THOUGHT.** 3 credits, tuition\*: Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

(Prereq #. Open only to students admitted to the University of Minnesota Graduate School. A joint Day/Extension class)

Spring Qtr, ★Sec 1, W, 7-9, BlegH 430,  
Lukermann

### Geology and Geophysics (Geo)

(106 Pillsbury Hall: 624-1333)

#### Institute of Technology

Textbooks for most Geo courses are available at the University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

(See also *Natural and Physical Sciences* in Compleat Scholar noncredit section)

E. Calvin Alexander, Jr., Professor  
Kerry Keen, Lecturer  
Kent Kirkby, Lecturer  
Karen Kleinspehn, Associate Professor  
Amy Leventer, Research Associate  
Robert E. Sloan, Professor

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Geology. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**Geo 1001 INTRODUCTION TO GEOLOGY.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20. (IS)

A nonmathematical introduction to the Earth, its internal structure, processes that shape its surface, theory of plate tectonics, action of streams, waves, wind and groundwater, limnology, fossil fuels and mineral deposits, environmental geology, planetary geology, and the geology of Minnesota. See **Geo 1021 for laboratory.** (No prereq. Meets concurrently with 5051 lecture)

Spring Qtr, Sec 2, W, 6:30-9, SmithH 100,  
Kleinspehn

(See also CSch 0550, *Drifting Continents/Expanding Oceans: An Introduction to the Dynamic Earth*)

**Geo 1002 HISTORICAL GEOLOGY.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20. (IS) 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.

(No prereq. Lectures meet concurrently. Sec 1 meets concurrently with Geo 5052 and is limited to a combined total of 20. Each lab section 2, 3, 4 limited to 20 students)

Spring Qtr, ★Sec 1, Lect T, 6:30-9, PillsH 110,  
Sloan; Lab W, 5:30-7:30, FordH 85

Spring Qtr, ★Sec 2, Lect T, 6:30-9, PillsH 110,  
Sloan; Lab W, 7:30-9:30, FordH 85

Spring Qtr, ★Sec 3, Lect T, 6:30-9, PillsH 110,  
Sloan; Lab Th, 5:30-7:30, FordH 85

Spring Qtr, ★Sec 4, Lect T, 6:30-9, PillsH 110,  
Sloan; Lab Th, 7:30-9:30, FordH 85

(See also GC 1112, *Science in Context: Human Uses of the Environment*; and BGS 3003, *Business and the Natural Environment*)

**Geo 1003 DINOSAURS AND THEIR WORLD.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Introduction to dinosaurs and the Mesozoic Era: concepts of plate tectonics, evolution, extinction, and global change. (No prereq. Meets concurrently with Geo 5054 sec 1)

Fall Qtr, Sec 1, T, 6:30-9, SmithH 100, Kirkby

**Geo 1005 GEOLOGICAL PERSPECTIVES ON ENERGY.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Introduction to the geologic aspects of energy resources, including conventional sources (petroleum, coal, fissionables, hydroelectric) and nonconventional sources (geothermal, solar, wind, tidal, fusion). History of energy use, limits on supplies, distribution of known and potential reserves, environmental implications of use of different energy resources, and implication of U.S. consumption patterns. Future energy supply options. (No prereq)

Winter Qtr, Sec 1, T, 6:30-9, PillsH 110,  
Alexander

**Geo 1021 PHYSICAL GEOLOGY LAB: GEOLOGY OF MINNESOTA.** 1 credit, tuition\*: Resident \$79.50; Non-resident \$230.55.

Ten laboratory exercises based on the geology of Minnesota. Labs will introduce bedrock, glacial history, topography, mineral resources, and environmental geology of the state through the use of appropriate minerals, rocks, topographic and geologic maps. See **Geo 1001 for lecture.** *Textbooks available only at Beckwith Copy Center, telephone 378-1433.* (Prereq 1001 or concurrent enrollment. Meets concurrently with 5051 lab. Limited to 25)

Spring Qtr, ★Sec 1, Th, 5-7, FordH 185

Spring Qtr, ★Sec 2, Th, 5-7, FordH 180

Spring Qtr, ★Sec 3, Th, 7-9, FordH 185

Spring Qtr, ★Sec 4, Th, 7-9, FordH 180

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**Geo 1601 OCEANOGRAPHY.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

A survey of how processes in the ocean interact, with frequent analogies drawn between the oceans and Lake Superior and smaller lakes in Minnesota. Topics include marine biology, waves, tides, chemical oceanography, marine geology, and human interaction with the sea. (No prereq)

Winter Qtr, Sec 1, M, 6:30-9, PillsH 110,  
Leventer

**Geo 5051 PHYSICAL GEOLOGY FOR TEACHERS.** 4 credits, \$1001, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40. (IS)

An introduction to the scientific methods and the nature of the Earth. Survey of the main features of the physical world and the processes that have evoked them. (Prereq 1 term college chemistry or physics; only for students holding degrees in education. Qualified students may register for graduate credit at the University of Minnesota. Lecture meets concurrently with 1001; lab meets concurrently with 1021)

Spring Qtr, Sec 1, Lect W, 6:30-9, SmithH 100;  
Lab Th, 7-9, FordH 185

**Geo 5052 HISTORICAL GEOLOGY FOR TEACHERS.** 4 credits, \$1002, tuition\* (includes \$1.50 course fee): Resident \$375.50; Non-resident \$1086.10; Resident Graduate credit \$473.50; Non-resident Graduate credit \$1039.90; Resident Graduate School credit \$863.50; Non-resident Graduate School credit \$1897.90.

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 5051 or #; only for students holding degrees in education. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 1002 lecture and lab. Limited to a combined total of 20)

Spring Qtr, ★Sec 1, Lect T, 6:30-9, PillsH 110,  
Sloan; Lab W, 5:30-7:30, FordH 85

**Geo 5054 INTRODUCTION TO THE MESOZOIC FOR TEACHERS.** 4 credits, \$1003, tuition\* (includes \$1.50 course fee): Resident \$375.50; Non-resident \$1086.10; Resident Graduate credit \$473.50; Non-resident Graduate credit \$1039.90; Resident Graduate School credit \$863.50; Non-resident Graduate School credit \$1897.90.

Introduction to dinosaurs and the Mesozoic Era; concepts of plate tectonics, evolution, extinction, and global change. Students will design modules to present the course material to elementary or secondary school students. (Prereq degree in education. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with Geo 1003)

Fall Qtr, Sec 1, T, 6:30-9, SmithH 100, Kirkby

**Geo 5613 TRACERS IN HYDROGEOLOGY.** 4 credits, tuition\* (includes \$1.50 course fee): Resident \$375.50; Non-resident \$1086.10; Resident Graduate credit \$473.50; Non-resident Graduate credit \$1039.90; Resident Graduate School credit \$863.50; Non-resident Graduate School credit \$1897.90.

Introduction to karst hydrogeology and the application of tracers in hydrogeology to determine the source, age, and mixing parameters of water in various natural reservoirs. Physical and chemical principles and processes operating in karst hydrogeology and the use of natural and synthetic chemical and isotopic labels or tracers to follow the movement and mixing of water through the hydrologic cycle. (Prereq 5641, #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, ●Sec 1, MW, 4:30-6, PillsH 121,  
Alexander

**Geo 5641 GENERAL AND PHYSICAL HYDROGEOLOGY.** 4 credits, tuition\* (includes \$1.50 course fee): Resident \$375.50; Non-resident \$1086.10; Resident Graduate credit \$473.50; Non-resident Graduate credit \$1039.90; Resident Graduate School credit \$863.50; Non-resident Graduate School credit \$1897.90.

Introduction to theory of groundwater geology, hydrologic cycle, watershed hydrology, Darcy's law, governing equations of groundwater motion, flow net analysis, analog models, and groundwater resource evaluation and development. (Prereq 1001, Chem 1052, Math 1252, Phys 1105; Geo majors core curriculum through 3402 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, ●Sec 1, Lect MW, 4:30-6, PillsH 110;  
Rec T, 4:30-5:30, PillsH 110, Keen

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Geo 5642 QUANTITATIVE HYDROGEOLOGY.** 4 credits, tuition\* (includes \$1.50 course fee): Resident \$375.50; Non-resident \$1086.10; Resident Graduate credit \$473.50; Non-resident Graduate credit \$1039.90; Resident Graduate School credit \$863.50; Non-resident Graduate School credit \$1897.90.

Applied analysis of steady and transient equations of groundwater motion and chemical transport using analytical and numerical methods. Topics include numerical flow net analysis, well hydraulics, salt-water intrusion problems, and unsaturated flow. (Prereq 1001, Chem 1052, Math 1252, Phys 1105; Geo majors core curriculum through 3402 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr, ⓉSec 1, Lect MW, 4:30-6, PillsH 110; Rec T, 4:30-5:30, PillsH 110, Keen

**Geo 5643 CHEMICAL HYDROGEOLOGY.** 4 credits, tuition\* (includes \$1.50 course fee): Resident \$375.50; Non-resident \$1086.10; Resident Graduate credit \$473.50; Non-resident Graduate credit \$1039.90; Resident Graduate School credit \$863.50; Non-resident Graduate School credit \$1897.90.

Introduction to the chemistry of natural waters, acid-base and redox reactions, carbonate equilibria, contaminant hydrology, isotope hydrology, and chemical modeling. (Prereq 1001, Chem 1052, Math 1252, Phys 1105; Geo majors core curriculum through 3402 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr, ⓉSec 1, Lect MW, 4:30-6, PillsH 110; Rec T, 4:30-5:30, PillsH 110, Alexander

### German (Ger)

(205 Folwell Hall: 625-2080)

#### College of Liberal Arts

(German, Scandinavian, and Dutch)

Textbooks for most Ger courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

(See also Dutch; History; Humanities; PSch 0743, German for Travelers; and REX 0701, The German Language in Minnesota)

Richard McCormick, Associate Professor  
Eva-Maria Metcalf, Education Specialist  
Jochen Schulte-Sasse, Professor  
Wolfgang Taraba, Professor  
Arlene Teraoka, Associate Professor  
Ray Wakefield, Associate Professor

Read about language laboratories on page 485.

**Language Help Sessions**—Extension Classes provides language help sessions for students enrolled in beginning (1101-1102-1103) Extension courses in German. In these sessions, tutors are available to assist students with language problems as well as with language practice. (No appointment is necessary.) Times and locations for each help session are announced by the language instructor at the beginning of each quarter.

**Beginning German**—Beginning students of German have two course sequences available. Ger 1101-1102-1103 is a sequence with conventional classroom sessions and teacher-student interaction. German 1110 is an individually paced course which has neither obligatory attendance nor conventional classroom sessions. In Ger 1110, students work independently; teacher-student interaction is at the discretion of the student and usually involves tutorial consultation and testing. Ger 1110 is not recommended for students who have not had language-learning experience in a classroom course.

College of Liberal Arts students who have studied German outside the University of Minnesota are required to take a proficiency exam before enrolling in courses above 1103. All students are strongly urged to take a placement test. Contact the Department of German at 625-2080 for more information.

**A minor in German can be completed in the evening.**

**Required Preparatory Courses:** 1106 or the Graduation Proficiency Test.

**Minor Requirements:** 3011, 3012, 3104, 3105; 8 cr of 3xxx-5xxx elective German courses.

**All courses must be taken A-F.** Courses taught in translation, except 3604 and 5xxx-level film classes, do not count toward the minor. The minor program must be approved by the Director of Undergraduate Studies.

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in German. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**Ger 1000 INDIVIDUALIZED GERMAN FOR NON-DEGREE CREDIT.** *This course has been merged with Ger 1110. Former students of Ger 1000 may continue in Ger 1110.*

\* Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**Ger 1101-1102-1103 BEGINNING GERMAN.** 5 credits each quarter, §1110, tuition each quarter\*: Resident \$397.50; Non-resident \$1152.75. (IS)

Classroom instruction with emphasis on proficiency according to the national ACTFL system. Reception (listening and reading) emphasized first, followed by production (speaking and writing). (No prereq for 1101; 1101 or equivalent cr of 1110 or 1 year high school German for 1102; 1102 or equivalent cr of 1110 or 2 years high school German for 1103. Limited to 25)

Fall Qtr, 1101, ★Sec 1, M, 6:20-8:50; Th, 6:20-8, FolH 104

Fall Qtr, 1101, ★Sec 2, M, 6:20-8:50; Th, 6:20-8, KoltH S136

Winter Qtr, 1102, ★Sec 1, M, 6:20-8:50; Th, 6:20-8, KoltH S132

Winter Qtr, 1102, ★Sec 2, M, 6:20-8:50; Th, 6:20-8, KoltH S133

Spring Qtr, 1103, ★Sec 1, M, 6:20-8:50; Th, 6:20-8, Arch 15

Spring Qtr, 1103, ★Sec 2, M, 6:20-8:50; Th, 6:20-8, KoltH S135

**Ger 1104-1105-1106 INTERMEDIATE GERMAN.** 5 credits each quarter, tuition\* each quarter: Resident \$397.50; Non-resident \$1152.75.

Classroom instruction with emphasis on proficiency according to the national ACTFL system. Listening, reading, speaking, writing at the Intermediate and Advanced levels on ACTFL scale. (Prereq 1103 or completion of 1110 or the Entrance Proficiency Test for 1104; 1104 for 1105; 1105 for 1106. Limited to 25)

Fall Qtr, 1104, ★Sec 1, M, 6:20-8:50; Th, 6:20-8, FolH 214, Taraba

Winter Qtr, 1105, ★Sec 1, M, 6:20-8:50; Th, 6:20-8, FolH 214, Taraba

Spring Qtr, 1106, ★Sec 1, M, 6:20-8:50; Th, 6:20-8, FolH 234, Taraba

**Ger 1110 INDIVIDUALIZED BEGINNING GERMAN.** 1-3 credits each quarter (15 credits maximum total), §1101-1102-1103, tuition each credit\*: Resident \$79.50; Non-resident \$230.55.

Structure, writing, and comprehension (listening and reading). Students work at own pace with books, computer, audio- and videotapes, earning credit through testing as they progress through material. Teachers available for consultation and testing. Two weeks after the end of the quarter, students who have completed more credits than they registered for should come in to the 101 Wesbrook Hall Registration Office to pay for the additional credits.

**No refunds will be given for uncompleted credits.** The continuation course is 1104. (No prereq. Limited to 75)

Fall Qtr, ★Sec 1, W, 6-8:30, first meeting in WaLib 15, subsequent meetings in FolH 147, Wakefield

Winter Qtr, ★Sec 2, W, 6-8:30, first meeting in WaLib 15, subsequent meetings in FolH 147, Wakefield

Spring Qtr, ★Sec 3, W, 6-8:30, first meeting in WaLib 15, subsequent meetings in FolH 147, Wakefield

**Ger 3011-3012-3013 CONVERSATION AND COMPOSITION.** 4 credits each quarter, tuition\*: Resident \$344; Non-resident \$997.60.

Spoken German; composition; development of vocabulary; grammar review. (Prereq 1106 and the Graduation Proficiency Test for 3011; 3011 for 3012; 3012 for 3013. A joint Day/Extension class limited to 10 Extension students)

Fall Qtr, 3011, ★Sec 1, TTh, 5:15-7, FolH 240, Metcalf

Winter Qtr, 3012, ★Sec 2, TTh, 5:15-7, FolH 240

Spring Qtr, 3013, ★Sec 3, TTh, 5:15-7, FolH 246

**Ger 3021 BUSINESS GERMAN.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Students learn and use the special terms and expressions needed to deal with everyday situations in business, banking, and personal affairs. This course should be of particular interest to anyone planning to live and do business in Germany. Material includes authentic documents from banks, courts, and public administration. (Prereq 3012 or equivalent. A joint Day/Extension class limited to 15 Extension students)

Spring Qtr, ★Sec 1, MTh, 6:15-7:30, FolH 114, Metcalf

**Ger 3104 READING AND ANALYSIS OF PROSE.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Reading fluency; appreciation of literary values through literary interpretation and familiarization with critical terminology. *Introductory course for a major or minor in German.* (Prereq 3012 or ¶3012. Limited to 25)

Winter Qtr, ★Sec 1, M, 6:20-8:50, KoltH S134, Schulte-Sasse

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Ger 3105 READING AND ANALYSIS OF DRAMA AND POETRY.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Reading fluency; appreciation of literary values through literary interpretation and familiarization with critical terminology. *Introductory course for a major or minor in German.* (Prereq 3012 or ¶3012. Limited to 25)

Spring Qtr, ★Sec 1, M, 6:20-8:50, FolH 214, Teraoka

**Ger 3604 LITERATURE, HISTORY, AND THE GERMAN FILM.** 4 credits, tuition\* (includes \$10 course fee): Resident \$354; Non-resident \$1007.60. An introduction to German film, in which the German cinema is examined against the background of Germany's cultural and socio-political history. We will consider cinematic adaptations of literary works, cinematic depictions of twentieth-century German history, and the various formal strategies employed in such films. Filmmakers studied will include such directors of the "New German Cinema" as Brückner, Sanders-Brahms, Schlöndorff, von Trotta, etc. Literary works to be read will include texts from such authors as Heinrich Böll and Theodor Fontane. Requires no knowledge of German. *May be taken for credit toward major or minor in German if student registers A-F and does a portion of the reading in German.* (No prereq. Limited to 40)

Fall Qtr, ★Sec 1, Th, 5:40-9, FolH 38, McCormick

**Ger 3641 INTRODUCTION TO GERMAN FOLKLORE.** 4 credits. Tentatively scheduled for Winter 1997.

**Ger 5011 ADVANCED COMPOSITION AND CONVERSATION.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Grammar review, oral presentations, many written assignments. (Prereq 3013 or equivalent. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Winter Qtr, ★○Sec 1, TTh, 4:40-6, FolH 246

**Ger 5622 NAZI AND POSTWAR GERMAN CINEMA.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

German cinema 1933-1962: Nazi cinema, including Riefenstahl, Harlan, Sirk; continuities (e.g.,

Harlan) and discontinuities (e.g., Staudte's work in East and West Germany) in postwar cinema. *May be taken for credit toward a major or minor in German if student registers A-F and does a portion of the readings in German.* (Prereq 3604 or other 3xxx-level film studies course or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, ○Sec 1, W, Lect, 4-6, FolH 38; Film Showing, 6:30-9, FolH 38, McCormick

**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 be satisfied by passing Ger 0222 with a grade of B or better (0222 must be taken on an A-F basis). Graduate students should check with their advisers for specific language requirements in their field of study.

**Ger 0221 READING GERMAN.** No credit, tuition\*: \$318.

This course is designed to help students acquire a reading knowledge of basic German as rapidly as possible. No prior knowledge of German is required. Grammar is reduced to a minimum. The course progresses from intensive reading of simple material to selections of moderate difficulty. Vocabulary building and analysis of compound words are emphasized. **Must be taken S-N.** (No prereq)

Fall Qtr, Sec 1, M, 6:20-9:30, AkerH 225

**Ger 0222 READING GERMAN.** No credit, tuition\*: \$318.

This course is designed to give students experience in intensive reading of German scholarly texts and enable graduate students to satisfy departmental requirements for an advanced degree. Graduate students achieving a grade of B or better in 0222 should bring their Graduate School language certification cards to 205 Folwell for signature. **Must be taken A-F.** (Prereq 0221 or 2 quarters of beginning German or 2 years of high school German)

Winter Qtr, Sec 1, M, 6:20-9:30, AkerH 225

German 0221 and 0222 are also offered as Summer Evening Extension Classes.

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Gerontology (Gero)

(333 Humphrey Center: 625-9099)

### All-University Council on Aging

*Inquire at the first class meeting where textbooks for Gero courses are available.*

**Gero 5100 LIFE COURSE PERSPECTIVES ON DIVERSITY IN AGING.** 4 credits, tuition\*: Resident \$ Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Social and psychological considerations in the aging of Americans with diverse racial and ethnic backgrounds. Topics include life course perspective; developmental and cohort differences; the impact of legal and institutional changes such as the Civil Rights movement, the World War II internment of Japanese Americans, social legislation (i.e., Medicare); and racial prejudice and discrimination on the middle and later stages of the life course of previous and current cohorts of persons of color. *For further information, call (612) 625-9099.* (Prereq advanced undergraduate, graduate student, or professional in aging. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr, ☉Sec 1, TTh, 4:40-6:25, HHHCtr 60

Also see page 520 for additional information about Gerontology opportunities.

## Global Campus

The Global Campus (study abroad) is located at 106 Nicholson Hall; telephone (612) 625-3379.

## Greek (Grk) and Modern Greek (MdGk)

See Classical and Near Eastern Studies

## Health

(See Public Health)

## Health Sciences

Please see the following alphabetical listings for course offerings:

Adult Psychiatry  
Biochemistry  
Biological Sciences

Cell Biology and Neuroanatomy  
Child and Adolescent Psychiatry  
Clinical Laboratory Science  
Family Practice and Community Health  
General College  
Health Science Units  
History of Medicine and Technology  
Hospital Administration  
Microbiology  
Nursing  
Pharmacognosy  
Physiology  
Physical Medicine and Rehabilitation  
Public Health

## Health Science Units (HSU)

(W42 Centennial Hall: 624-7102)

### Health Sciences

Textbooks for most HSU courses are available at University of Minnesota Bookstore—Health Sciences (625-8600).

(See also Anth 5920, Topics in Anthropology: Anthropology of AIDS; Family Social Science; and PubH 5010, Public Health Approach to AIDS)

S. Bruce Benson, Associate Professor  
Rondell Berkeland, Director of Occupational Therapy

Corine T. Ellingham, Associate Professor of Physical Medicine and Rehabilitation

David Garloff, Director, Health Sciences Learning Resources

Karen Karni, Associate Professor, Laboratory Medicine and Pathology

Thomas McKennell, Assistant Professor and Director of Pharmacy Continuing Education

Kathleen Newell, Associate Professor, Preventive Sciences

Laura Pizer, Lecturer, Clinical Instructor, Physical Medicine and Rehabilitation

Frank Rhame, Assistant Professor, Medical School, Infection Control Department

James Rothenberger, Instructor, School of Public Health

Greg Sales, Associate Professor, College of Education and Human Development

Suzanne J. Schoenfelt, Instructor, College of Pharmacy, School of Nursing

Barbara A. Spradley, Associate Professor, Public Health Administration

**Graduate Credit**—Students who wish to offer 5-level Health Science Units (HSU) courses toward M.Ed., M.P.H., and PharmD may do so under the

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

terms of their approved degree programs. However, HSU courses do not qualify for *Graduate School* credit. Students who wish to obtain Graduate School credit for a 5-level course that is jointly listed with an HSU course must register for the course *under the other department's course number and designator*.

**HSU 3003 FUNDAMENTALS OF ALCOHOL AND DRUG ABUSE.** 2 credits, §5032, §PubH 3003, 5003, tuition\*: Resident \$300; Non-resident \$660.

Lecture, discussion, and special readings on the scientific, socio-cultural, and attitudinal aspects of alcohol and other drug abuse problems, with special emphasis on incidence, prevalence, high risk populations, prevention and intervention. (No prereq. Meets concurrently with 5032, PubH 3003, 5003) Winter Qtr, Sec 1, Th, 4:40-6:40, MoosT 2-530, Rothenberger

**HSU 3005 ORIENTATION TO THE HEALTH SCIENCES.** 2 credits, tuition\*: Resident \$300; Non-resident \$660.

An overview of health science professions through lectures, demonstrations, videos, and tours. Designed to provide factual information and guidance for students considering a health science career. Evaluation will be based on class participation and individual student projects. **Must be taken S-N.** (No prereq. Limited to 100)

Winter Qtr, ★Sec 1, T, 4:15-6, MoosT 2-530, Karni, Newell

**HSU 3008 ORIENTATION TO MEDICINE.** 2 credits, tuition\*: Resident \$300; Non-resident \$660.

An overview of medicine including a variety of weekly topics to include: history of medicine, the future of medicine and medical education; ethical issues related to medicine; commitment to service in relation to medicine; careers in medicine other than MD; the process of getting into medical school and selecting schools; the experience of the medical school student; life as a physician. **Must be taken S-N.** (No prereq. Limited to 40)

Spring Qtr, ★Sec 1, Th, 3-5, MoosT

**HSU 5007 HEALTH LEADERSHIP AND EFFECTING CHANGE.** 3 credits, §PubH 5727, tuition\*: Resident \$450; Non-resident \$990.

Application of a broad theoretical base in planned change to solve managerial and organizational problems in students' roles as leaders in the health professions. (Prereq Public Health or other health sciences grad students interested in becoming more

effective leaders and change agents in their professional roles or written #. See note about graduate credit above. Meets concurrently with PubH 5727. A joint Day/Extension class limited to a combined total of 5 Extension students)

Winter Qtr, ★Sec 1, W, 4:40-7:25, Mayo D326, Spradley

**HSU 5009 MULTIDISCIPLINARY PERSPECTIVES ON AGING.** 4 credits, §AdEd 5440, §CPsy 5305, Phar 5009, PA 5414, SW 5024, Soc 5960, PubH 5737, tuition\*: Resident \$600; Non-resident \$1320.

See course description for Soc 5960. (No prereq. See note about graduate credit above. Meets concurrently with AdEd 5440, CPsy 5305, Phar 5009, PA 5414, PubH 5737, Soc 5960, SW 5024. A joint Day/Extension class)

Fall Qtr, ★Sec 1, MW, 4:40-6:25, MoosT 2-690 (Limited to a combined total of 37 Extension students)

Spring Qtr, Sec 2, MW, 4:40-6:25, MoosT 2-690

**HSU 5010 PUBLIC HEALTH APPROACHES TO AIDS.** 3 credits, §PubH 5010, tuition\*: Resident \$450; Non-resident \$990.

A survey of HIV infection from a public health perspective with emphasis on intervention. Topics include epidemiological and clinical features of HIV infection, the impact and response of affected communities and populations, and behavior change principles as they apply to communities, schools, and social policy. Community resources supplement lectures with case presentations. (No prereq. See note above about graduate credit. Meets concurrently with PubH 5010. A joint Day/Extension class)

Fall Qtr, Sec 1, W, 4:40-7:20, MoosT 2-620, Rothenberger, Rhame

Spring Qtr, Sec 2, W, 4:40-7:20, MoosT 2-620, Rothenberger, Rhame

**HSU 5011 THE TEACHING-LEARNING PROCESS IN THE HEALTH CARE SETTING.** 3 credits, tuition\*: Resident \$450; Non-resident \$990.

Learning activities include lectures, discussion, written assignments, and projects. Activities designed to meet the professional needs of the student. (No prereq. See note about graduate credit above. A joint Day/Extension class)

Spring Qtr, Sec 1, M, 3:35-6:20, MoosT 2-571, 2-585, Garloff, Newell

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



**HSU 5017 WRITTEN COMMUNICATION SKILLS FOR HEALTH PROFESSIONALS.** 3 credits, §Nurs 5720, tuition\*: Resident \$450; Non-resident \$990.

Students meet in workshop sessions where they critique the work of class participants. Throughout the course, emphasis is on organization, style, clarity of presentation, conciseness, accuracy, transitions, consistency, and writing mechanics. Students also examine journal articles, style, the work of professional authors, and other writing guidelines. Depending on the interest of class members, some emphasis will be placed on writing journal articles for publication. A fair amount of outside reading is required. The course works best for students who are already in the process of writing or trying to publish a paper. The class serves as the structure for students to compose their own work. (No prereq. Students seeking graduate credit should enroll in Nurs 5720. Meets concurrently with Nurs 5720. Limited to a combined total of 15)  
 Winter Qtr, ★Sec 1, T, 4-6:30, MoosT 15-250, Schoenfelt

**HSU 5027 HUMAN SEXUAL BEHAVIOR.** 5 credits, §FSoS 5001, tuition\*: Resident \$750; Non-resident \$1650.

Multidisciplinary approach to human sexuality, with emphasis on sexual development through individual and family life cycles. Oriented toward applying scientific knowledge to the promotion of sexual health through individual, family, and community services. (Prereq upper division standing and 12 credits in social, behavioral or health science; or graduate status in behavioral, social, educational, health science or human service program; or #. See note about graduate credit above. Meets concurrently with FSoS 5001)

Fall Qtr, Sec 1, Th, 5:30-9:40, BorH 335, StP Campus

Spring Qtr, ○Sec 2, Th, 4-8:20, McNH 33, StP Campus (A joint Day/Extension class)

**HSU 5031 BIOLOGY OF AGING.** 2 credits, §Phar 5007, §SAPh 5007, tuition\*: Resident \$300; Non-resident \$660.

*Offered via interactive television between two sites, with students at both locations.* Biological theories of aging are reviewed; biological changes associated with aging in selected organ and sensory systems are studied. Other topics examined are the nutritional needs of the elderly and their use of medications. Physical changes due to normal aging are contrasted with those having a pathological basis. (No prereq. See note about graduate credit above. Meets concurrently with Phar 5007 and SAPh 5007. A joint Day/Extension class)

Winter Qtr, ○Sec 1, Th, 4:40-6:25, MoosT 5-125, McKennell

**HSU 5032 FUNDAMENTALS OF ALCOHOL AND DRUG PROBLEMS.** 2 credits, §3003, §PubH 3003, 5003, tuition\*: Resident \$300; Non-resident \$660.

See course description for HSU 3003. (No prereq. See note about graduate credit above. Meets concurrently with 3003, PubH 3003, 5003)

Winter Qtr, Sec 1, Th, 4:40-6:40, MoosT 2-530, Rothenberger

(See also Family Social Science)

**HSU 5040 DYING AND DEATH IN CONTEMPORARY SOCIETY.** 3 credits, §PubH 5040, §Mort 5040, tuition\*: Resident \$450; Non-resident \$990.

*Taught in conjunction with members of the Mortuary Science staff.* (Prereq Health Science major, School of Public Health major, education senior, Mortuary Science major, or written #. See note about graduate credit above. Meets concurrently with PubH 5040. A joint Day/Extension class)

Winter Qtr, ○Sec 1, W, 4:40-7:20, MoosT 2-690, Rothenberger

**HSU 5210 TERMINOLOGY OF THE HEALTH SCIENCES.** 2 credits, §Phar 5210, tuition\*: Resident \$300; Non-resident \$660.

A self-study course that has been designed to provide students with a working knowledge of the terminology utilized in the health sciences. There are no formal class sessions. Students take four tests during the term, and the schedule for these is provided at the beginning of each term, when orientation sessions are held. For information, call 624-2442 before the first day of the term, or go to room 5-120 HSUnitF during regular office hours. (No prereq. May not be taken for graduate credit at the University of Minnesota. Meets concurrently with Phar 5210. A joint Day/Extension class)

Fall Qtr, ○Sec 1, Arr (call 624-2442), McKennell  
 Winter Qtr, ○Sec 2, Arr (call 624-2442), McKennell  
 Spring Qtr, ○Sec 3, Arr (call 624-2442), McKennell

**HSU 5297 REHABILITATION: AN INTERNATIONAL PERSPECTIVE.** 3 credits, §PMed 5297, tuition\*: Resident \$450; Non-resident \$990.

Explores physical medicine and rehabilitation as well as prevention issues abroad. The seminar format focuses on cultural factors which influence health and health services. **Must be taken S-N.** (Prereq rehab, health or community professional qualified students, or #. See note about graduate credit above. Meets concurrently with PMed 5297. Limited to a combined total of 20)

Spring Qtr, ★Sec 1, W, 4:45-7:30, ChRC 208, Ellingham, Eschwey, Pizer

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

### Health, Environmental

(See Public Health)

### Hebrew

See Classical and Near Eastern Studies

### Higher Education (HiEd)

See Educational Policy and Administration (EdPA).

### History (Hist)

(614 Social Sciences: 624-2800)

#### College of Liberal Arts

Textbooks for most Hist courses are available at University of Minnesota Bookstore—West Bank (625-3000).

(See also Afro-American and African Studies; Ancient Studies; Area Studies Programs; the Institute of Languages and Literatures; Interdepartmental Study Courses, page 260; Political Science; General College social and behavioral science courses; *Social Sciences, Public Issues, and Humanities* in Compleat Scholar noncredit section; History of Science and Technology; Religious Studies; and Women's Studies)

Bernard S. Bachrach, Professor

Marilyn Bowman, Lecturer in Chicano Studies

Kinley J. Brauer, Professor

Thomas Buckley, Associate Professor, General College

Caesar Farah, Professor

Edward Farmer, Professor

George Green, Associate Professor

Allen Isaacman, Professor

Thomas Kelly, Professor

David Kopf, Professor

Byron K. Marshall, Professor

David Noble, Professor

Helena Pohlandt-McCormick, Teaching Assistant

Richard Rudolph, Professor

Balkacem Saadallah, Visiting Professor

Stuart Schwartz, Professor

Theofanis G. Stavrou, Professor

Loren E. Tesdell, Lecturer

John Thayer, Professor

James D. Tracy, Professor

William E. Wright, Professor

**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 adviser (625-2500).

#### B.A. Major Sequence

##### Required Preparatory Courses

At least three introductory (1000-level) history courses (completed in first 2 years when possible). Juniors and seniors may substitute 3000-5000-level equivalent courses.

In addition to the CLA second language requirement, students planning a graduate program in history should acquire a reading knowledge of one or more languages early in their undergraduate studies.

##### Major Requirements

Minimum of 10 3000-5000-level history courses, to include: Four courses (excluding survey courses) in a field of concentration.

3955 Introduction to Historical Research—taken prior to 3961

3961 Major Paper—completed during senior year

##### Distribution of the 13 Required Courses

Among the 13 1000, 3000, and 5000-level courses required, students must satisfy both the chronological and the geographical distribution requirements:

1. *Chronological*—At least 2 courses from the pre-modern period, and at least 2 courses from the modern period.
2. *Geographical*—At least one course in each of three different geographical areas.

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

A minor in History is also available. Interested students should call CEE Counseling, 625-2500.

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in History. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**Continuing Education for Women (CEW) section available in the following course:** Hist 3051

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**Hist 1017, 1018 INTRODUCTION TO WORLD HISTORY.** 4 credits each quarter, §1012, 1013, 1012H, 1013H, tuition each quarter\*: Resident \$318; Non-resident \$922.20. (IS 1012, 1013)

*1017:* World civilizations in the era of global contact, 1450-1960. Linking the globe through trade and migration; cultural, racial, and religious contact and clash in the Americas, Asia, and Africa; family farms to plantation agriculture; European industrialization, individualism, nationalism, and imperialism; independence movements, decolonization, and the colonial heritage. *1018:* The world today and its recent past. War and Cold War; expansion of the American and Soviet economic, political and cultural systems, dominant culture, and minority questions; contemporaneous developments in the Third World; global order; movements for peace, ecology, and human right. (No prereq)

Fall Qtr, 1017, Sec 1, M, 6-9, AndH 350

Spring Qtr, 1018, Sec 1, M, 6-9, BlegH 215

**Hist 1026, 1027, 1028 HISTORY OF WESTERN CIVILIZATION.** 4 credits each quarter, §1021, 1022, 1023, tuition each quarter\*: Resident \$318; Non-resident \$922.20.

Fundamental survey of the political, cultural, and social development of the West. Writing is emphasized in this course. *1026:* Surveys the civilizations of ancient Egypt, Mesopotamia, Greece, and Rome from the beginnings to 500 A.D. *1027:* Covers Byzantine, Islamic, and Western European civilizations from 500 to 1650 A.D. *1028:* Examines European civilizations from 1650 to the present day. Courses need not be taken in sequence. (No prereq)

Fall Qtr, 1027, Sec 1, M, 6-9, BlegH 215

Winter Qtr, 1028, Sec 1, M, 6-9, BlegH 215

Spring Qtr, 1026, Sec 1, M, 6-9, SocSci 101

**Hist 1101 INTRODUCTION TO MEDIEVAL HISTORY.** 4 credits, §Hist 3101, tuition\*: Resident \$318; Non-resident \$922.20.

Europe from the decline of Rome to the early Renaissance; politics, institutions, society, economy, and culture of the Middle Ages. (No prereq. Meets concurrently with 3101)

Fall Qtr, Sec 1, W, 6:20-8:50, BlegH 150,

Bachrach

**Hist 1305 CULTURAL PLURALISM IN AMERICAN HISTORY.** 4 credits, tuition each quarter\*: Resident \$318; Non-resident \$922.20. (IS)

Survey of the development of American Society focusing on the role of Afro-Americans, Native

Americans, Asian Americans, and Hispanic Americans. Concepts of Cultural Pluralism, racism, and inter-group relations explored within a comparative historical framework. (No prereq)

Fall Qtr, Sec 1, T, 6:20-8:50, AndH 230

(See also CSch 0312, Voices From the American Mosaic: Exploring Ethnic History Through Oral History and Autobiography)

**Hist 1307, 1308 AMERICAN HISTORY.** 4 credits each quarter, §1301, 1302, tuition each quarter\*: Resident \$318; Non-resident \$922.20. (IS)

Survey of political, economic, and social history of the United States with emphasis on forces that resulted in the emergence of Modern America. *1307:* Colonial early national period from the Revolution through Civil War and Reconstruction. *1308:* Modern America from 1880 to the present. (No prereq)

Fall Qtr, 1307, Sec 1, W, 6:20-8:50, AndH 270

Winter Qtr, 1308, Sec 1, W, 6:20-8:50, HHHCtr 20

Spring Qtr, 1308, Sec 2, W, 6:20-8:50, AndH 350

**Hist 3001, 3002, 3003 INTRODUCTION TO MODERNEUROPEAN HISTORY SINCE THE MIDDLE AGES.** 4 credits each quarter, §1001, 1002, 1003, tuition each quarter\*: Resident \$344; Non-resident \$997.60.

*3001:* Western European civilization to 1715. *3002:* Revolution, liberalism, and nationalism to 1870. *3003:* 1870 to recent times. (No prereq)

Fall Qtr, 3001, Sec 1, W, 6:20-8:50, BlegH 240

Winter Qtr, 3003, Sec 1, W, 6:20-8:50, BlegH 235, Wright

Spring Qtr, 3002, Sec 1, W, 6:20-8:50, Arr, Thayer

**Hist 3051 ANCIENT CIVILIZATION.** 4 credits, §1051, tuition\*: Resident \$344; Non-resident \$997.60.

The history of civilization of the ancient world to 500 B.C. (No prereq)

Fall Qtr, Sec 1, T, 6:20-8:50, SocSci 1383, Kelly

Spring Qtr, Sec 2, T, 9:30 a.m.-12, MacP. Offered through Continuing Education for Women

**Hist 3052 ANCIENT CIVILIZATION.** 4 credits, §1052, tuition\*: Resident \$344; Non-resident \$997.60.

History and civilization of the ancient world. 500-146 B.C. (No prereq)

Winter Qtr, Sec 1, T, 6:20-8:50, BlegH 235,

Kelly

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Hist 3053 ANCIENT CIVILIZATION.** 4 credits, §1053, tuition\*: Resident \$344; Non-resident \$997.60.

History and civilization of the ancient world, 146 B.C. to A.D. 337. (No prereq)

Spring Qtr, Sec 1, T, 6:20-8:50, BlegH 260

**Hist 3101 INTRODUCTION TO MEDIEVAL HISTORY.** 4 credits, §Hist 1101, tuition\*: Resident \$344; Non-resident \$997.60.

See course description for Hist 3101. (No prereq. Meets concurrently with 1101)

Fall Qtr, Sec 1, W, 6:20-8:50, BlegH 150, Bachrach

(See also MeSt 1001, An Introduction to the Middle Ages)

**Hist 3348 WOMEN IN MODERN AMERICA: 1890-1980.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Women in the United States from the late Victorian era to the present changes in labor force participation, family patterns, sexuality, education, feminism; images of women from Gibson girl to feminine mystique. (No prereq)

Spring Qtr, Sec 1, M, 6:20-8:50, RarigC 616

(See also CSch 0300, Our Founding Mothers: Early Suffragettes and Feminists)

**Hist 3401 SURVEY OF LATIN AMERICAN HISTORY: COLONIAL PERIOD TO 1800.** 4 credits, §LAS 3401, tuition\*: Resident \$344; Non-resident \$997.60. (IS)

The pre-Hispanic and colonial period to 1800, with emphasis on social, cultural, and economic aspects. (No prereq. Meets concurrently with LAS 3401)

Fall Qtr, Sec 1, M, 6:20-8:50, BlegH 155, Schwartz

**Hist 3402 SURVEY OF LATIN AMERICAN HISTORY: 1800-1929.** 4 credits, §LAS 3402, tuition\*: Resident \$344; Non-resident \$997.60. (IS)

Development of new nations from independence to the emergence of dependent economies. (No prereq. Meets concurrently with LAS 3402)

Winter Qtr, Sec 1, M, 6:20-8:50, HHCtr 60

**Hist 3403 SURVEY OF LATIN AMERICAN HISTORY: 1929 TO PRESENT.** 4 credits, §LAS 3403, tuition\*: Resident \$344; Non-resident \$997.60. (IS)

Contradictions of modern societies: economic expansion, dependency, population growth and the social crisis, democratic and authoritarian politics. (No prereq. Meets concurrently with LAS 3403)

Spring Qtr, Sec 1, T, 6:20-8:50, Law 3

**Hist 3421 THE WORLD AND THE WEST.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Survey of the political, economic, and cultural interaction between the peoples of Europe, Africa, America, and Asia. Era of Western dominance, 1500-1850. Sea power, colonialism, imperialism. (No prereq)

Spring Qtr, Sec 1, M, 6:20-8:50, BlegH 230, Tracy

**Hist 3424 HISTORY OF MEXICO: PRE-COLUMBIAN PERIOD THROUGH INDEPENDENCE.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Indian cultures of Mexico prior to the conquest and subsequent contact between Europeans and Indians during the formation of Mexican society. (No prereq)

Winter Qtr, Sec 1, T, 6:20-8:50, BlegH 245, Schwartz

**Hist 3431 HISTORY OF AFRICA TO 1800.** 4 credits, §Afro 3431, tuition\*: Resident \$344; Non-resident \$997.60.

Socioeconomic, political, and cultural development in pre-colonial Africa; emphasis on the slave trade, Islamic revolution, and European commercial penetration. (No prereq)

Fall Qtr, Sec 1, Th, 6:20-8:50, BlegH 215, Pohlandt-McCormick

**Hist 3432 HISTORY OF AFRICA: 1800 TO PRESENT.** 4 credits, §Afro 3432, tuition\*: Resident \$344; Non-resident \$997.60.

Colonial rule, the forced restructuring and underdevelopment of African economies, African resistance, nationalism, and the problems of independence. (No prereq)

Winter Qtr, Sec 1, T, 6:20-8:50, HHCtr 20, Pohlandt-McCormick

**Hist 3441 THE SPANISH-MEXICAN BORDERLANDS AND THE CHICANO EXPERIENCE TO 1900.** 4 credits, §Chic 3441, tuition\*: Resident \$344; Non-resident \$997.60.

History of Chicanos to 1900. The Spanish conquest and colonization of the borderlands. Mexican society in the early 19th century, the Mexican-American War and aftermath. *Meets CLA Cultural Pluralism requirement.* (No prereq. Meets concurrently with Chic 3441)

Spring Qtr, Sec 1, W, 6:20-8:50, ChDev 105, Bowman

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**Hist 3442 SURVEY OF CHICANO HISTORY, 1900 TO THE PRESENT.** 4 credits, §Chic 3442, tuition\*: Resident \$344; Non-resident \$997.60.

Twentieth century Chicano experience including migration and repatriation, contemporary politics, society, and culture. *Meets CLA Cultural Pluralism requirement.* (No prereq. Meets concurrently with Chic 3442)

Fall Qtr, Sec 1, W, 6:20-8:50, BuH 123, Bowman

**Hist 3463 INTRODUCTION TO EAST ASIA IN MODERN TIMES.** 4 credits, §EAS 1463, tuition\*: Resident \$344; Non-resident \$997.60.

Decline of Asian empires; European and American imperialism; Asian responses; nationalism, social revolution, reintegration, modernization in China, Japan, Vietnam, Korea; retreat of European and American empires. (No prereq. Meets concurrently with EAS 1463)

Fall Qtr, Sec 1, Th, 6:20-8:50, BlegH 115, Marshall

**Hist 3465 CHINA'S RESPONSE TO THE WEST, 1750-1911.** 4 credits, §Hist 5465, §EAS 3465, tuition\*: Resident \$344; Non-resident \$997.60.

Eighteenth-century demographic crisis; the growth of Western trade, opium wars, and peasant rebellion; early reform efforts, cultural conflicts with the West, imperialism in China, and the first phase of the Chinese revolution. (No prereq. Meets concurrently with 5465, EAS 3465)

Fall Qtr, Sec 1, T, 6:20-8:50, BlegH 120

**Hist 3467 THE NATIONALIST REVOLUTION IN CHINA: 1900 TO PRESENT.** 4 credits, §5467, §EAS 3467, tuition\*: Resident \$344; Non-resident \$997.60.

Failure of the early republic, warlordism, the new culture movement, and the development of Chinese nationalism. The rise of the Nationalist Party and intervention of the Soviet Union, Japan, and the United States. Taiwan and the People's Republic of China. (No prereq. Meets concurrently with Hist EAS 3467)

Spring Qtr, Sec 1, Th, 6:20-8:50, BlegH 140

**Hist 3468 PEOPLE'S REPUBLIC OF CHINA: THE COMMUNIST REVOLUTION, 1900 TO PRESENT.** 4 credits, §5468, §EAS 3468, tuition\*: Resident \$344; Non-resident \$997.60.

Introduction of Marxism to China, rise of Communist Party, and development of a rural guerilla movement. The career of Mao Tse-tung and developments in the People's Republic. The Great Leap, Cultural Revolution, Gang of Four. (No prereq. Meets concurrently with EAS 3468)

Winter Qtr, Sec 1, Th, 6:20-8:50, BlegH 225

**Hist 3471 20TH-CENTURY JAPAN.** 4 credits, §5471, §EAS 3471, tuition\*: Resident \$344; Non-resident \$997.60.

The development of an industrial society, parliamentary government, mass culture, and imperialism from the Meiji reforms of the late 19th century through World War II to the contemporary period. (No prereq. Meets concurrently with 5471 and EAS 3471)

Spring Qtr, Sec 1, M, 6:20-8:50, BlegH 105, Marshall

**Hist 3505 SURVEY OF THE MIDDLE EAST.** 4 credits, §Arab 3505, §MELC 3505, tuition\*: Resident \$344; Non-resident \$997.60.

Lands and peoples of the Middle East, historical evolution of the Middle East civilizations and societies, the status of Middle East countries in world affairs. (No prereq. Meets concurrently with Arab 3505, MELC 3505)

Spring Qtr, Sec 1, Th, 6:20-8:50, BlegH 350, Tesdell

**Hist 3544 THE ARAB WORLD IN RECENT TIMES.** 4 credits, §Arab 3544, §MELC 3544, tuition\*: Resident \$344; Non-resident \$997.60.

Central Arab lands (the Arabian peninsula, Iraq, Syria, Jordan, Lebanon, Egypt) and North African region (Libya, Tunisia, Morocco, Algeria) from end of World War I to the present. Foreign occupation and struggle for independence, position in regional and international politics. (No prereq. Meets concurrently with Arab 3544, MELC 3544)

Fall Qtr, Sec 1, W, 6:20-8:50, BlegH 245, Saadallah

Winter Qtr, Sec 2, W, 6:20-8:50, BlegH 340, Saadallah

**Hist 3609 MILITARY HISTORY OF MEDIEVAL WESTERN EUROPE.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Concept and conduct of war in Western Europe in the Middle Ages and the relation between military organization and society. (No prereq. Meets concurrently with MeSt 3610 sec 2)

Winter Qtr, Sec 1, W, 6:20-8:50, RarigC 610, Bachrach

**Hist 3613 HISTORY OF THE CRUSADES.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Examination of the crusading spirit in Europe and the results of the medieval crusades from ca. 1095 to ca. 1285. (No prereq)

Spring Qtr, Sec 1, W, 6:20-8:50, BlegH 350

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Hist 3633 HISTORY OF GERMANY: EMPIRE TO HITLER, 1848-1945.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Unification, political and economic development, growth of socialism, World War I and revolution, the Weimar years, the Nazi seizure of power. (No prereq)

Spring Qtr, Sec 1, W, 6:20-8:50, AndH 330,  
Rudolph

**Hist 3637 RUSSIAN HISTORY FROM PETER THE GREAT TO THE PRESENT.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

A survey of Russian history since Peter the Great. (No prereq)

Fall Qtr, Sec 1, M, 6:20-8:50, AndH 370

**Hist 3708 SOCIAL AND ECONOMIC HISTORY OF MODERN EUROPE.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Social change; history of the family, marriage, and sexuality. (No prereq)

Fall Qtr, Sec 1, W, 6:20-8:50, SocSci 101,  
Rudolph

**Hist 3721 EUROPE IN THE ERA OF WORLD WAR I.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Political, social, and diplomatic background of Europe on eve of World War I; origins of conflict; impact of war and revolution on European society; the peace settlement. (No prereq)

Fall Qtr, Sec 1, W, 6:20-8:50, BlegH 125,  
Munholland

**Hist 3722 EUROPE IN THE ERA OF WORLD WAR II.** 4 credits, §3224, tuition\*: Resident \$344; Non-resident \$997.60.

The rise of fascism and totalitarian movements in Europe; political and military origins of World War II; the course of the war and its impact upon European society. (No prereq)

Spring Qtr, Sec 1, T, 6:20-8:50, BlegH 350,  
Munholland

**Hist 3723 EUROPE SINCE WORLD WAR II.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Reconstruction of European politics and society; emergence of cold war in Europe; decolonization; economic cooperation and development; East-West relations. (No prereq)

Winter Qtr, Sec 1, Th, 6:20-8:50, BlegH 205

**Hist 3748 THE AUSTRIAN REPUBLIC FROM WORLD WAR I TO PRESENT.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

The First Republic; the state no one wanted; Anschluss and Hitler; World War II; decade of occupation; the new Austria. (No prereq)

Spring Qtr, Sec 1, W, 6:20-8:50, SocSci 101,  
Wright

**Hist 3812 CIVIL WAR AND RECONSTRUCTION.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60. (IS)

Politics and society from 1848 to 1877. The Compromise of 1850 and the "finality" period; nativism and the Know-Nothing movement; party realignment and the rise of the Republican Party; the West; Dred Scott, John Brown, and the coming of the Civil War; Lincoln, Douglas, and the crisis of secession; the rise and fall of the Confederacy; Grant, Sherman, and the politics of total war; emancipation; presidential and radical reconstruction; the Ku Klux Klan; the origins of the Gilded Age; redemption and the Compromise of 1877. (No prereq)

Winter Qtr, Sec 1, T, 6:20-8:50, BlegH 10, Noble

**Hist 3821 UNITED STATES IN THE 20TH CENTURY: 1890-1932.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

The growth of industrialism, the corporation and the city; the progressive movement; the emergence of the United States as a world power; World War I; prohibition and women's suffrage; social and cultural conflict in the 1920s; the coming of the Great Depression. (No prereq)

Spring Qtr, Sec 1, Th, 6:20-8:50, BlegH 255

**Hist 3822 UNITED STATES IN THE 20TH CENTURY: 1932-1960.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60. (IS)

The Great Depression and the New Deal; the challenge of fascism and the coming of World War II; the origins of the Cold War; the great red scare; the politics and culture of the Eisenhower era; the origins of the civil rights movement. (No prereq)

Winter Qtr, Sec 1, W, 6:20-8:50, BlegH 10

**Hist 3823 UNITED STATES IN THE 20TH CENTURY: 1960-PRESENT.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

The conflicts of the 1960s; the New Frontier and Great Society; the black struggle for freedom; the Vietnam War; the new left and counterculture; the women's movement and gay liberation; Watergate and the uncertainties of the 1970s; the Reagan counterrevolution. (No prereq)

Fall Qtr, Sec 1, W, 6:20-8:50, BlegH 155

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**Hist 3883 HISTORY OF AMERICAN FOREIGN RELATIONS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60. (IS)

American foreign relations during the Cold War; 1941 to present. (No prereq)

Spring Qtr, Sec 1, W, 6:20-8:50, HHCtr 60, Brauer

(See also CSch 0391, Morality and Foreign Policy)

**Hist 3891 AMERICAN MILITARY HISTORY.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Impact of geography, politics, society, technology, and leadership in the development of the military from the colonial period to the Spanish-American War. (No prereq)

Winter Qtr, Sec 1, T, 1:30-4, WullH 140, Buckley

**Hist 3892 AMERICAN MILITARY HISTORY.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Impact of geopolitics, technology, society, and leadership in the rise of land, sea, and air forces to global dominance in the twentieth century. (No prereq)

Spring Qtr, Sec 1, T, 1:30-4:10, CivE 213, Buckley

(See also CSch 0304, America's Wars)

**Hist 3955 INTRODUCTION TO HISTORICAL RESEARCH.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Practical course. Use of documents and different kinds of historical writing. Students read and discuss material representative of contrasting historical perspectives. Faculty guidance. Priority given to history majors. Sign up in department office, 672 SocSci on the West Bank campus. (Prereq written Δ. Limited to 15)

Fall Qtr, ★Sec 1, W, 6:20-8:50, Law 1

Winter Qtr, ★Sec 2, W, 6:20-8:50, BlegH 350, Green

**Hist 3961 MAJOR PAPER.** 5 credits, tuition\*: Resident \$430; Non-resident \$1247.

Required of history majors, usually taken in senior year. Research papers on topics students choose; work largely with original materials (printed documents, memoirs, literature). Sign up in department office, 668 SocSci on the West Bank campus. (Prereq written Δ. Limited to 15)

Winter Qtr, ★Sec 1, W, 6:20-8:50, Law 3

Spring Qtr, ★Sec 2, W, 6:20-8:50, SocSci 1383, Green

**Hist 5265 MODERN RUSSIA: 19TH-CENTURY.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Political, social, and cultural developments from Alexander to the 1905 revolution. The revolutionary movement and the consequences of the emancipation of the serfs; Russian industrialization. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr, Sec 1, M, 6:20-8:50, SocSci 101, Stavrou

**Hist 5266 MODERN RUSSIA: THE 20TH CENTURY.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Fall of the Russian monarchy, revolutions, and Soviet regime. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr, Sec 1, M, 6:20-8:50, BlegH 130, Stavrou

**Hist 5465 CHINA'S RESPONSE TO THE WEST, 1750-1911.** 4 credits, §Hist 3465, §EAS 3465, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

See course description for Hist 3465. (No prereq. May not be taken for graduate credit at the University of Minnesota. Meets concurrently with 3465, EAS 3465)

Fall Qtr, Sec 1, T, 6:20-8:50, BlegH 120

**Hist 5467 THE NATIONALIST REVOLUTION IN CHINA, 1900 TO PRESENT.** 4 credits, §3467, §EAS 3467, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

See course description for Hist 3467. (No prereq. May not be taken for graduate credit at the University of Minnesota. Meets concurrently with 3467, EAS 3467)

Spring Qtr, Sec 1, Th, 6:20-8:50, BlegH 140

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

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## Course Descriptions

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**Hist 5471 20TH-CENTURY JAPAN.** 4 credits, §Hist 3471, §EAS 3471, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

See course description for Hist 3471. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with Hist 3471 and EAS 3471)

Spring Qtr, Sec 1, M, 6:20-8:50, BlegH 105, Marshall

### History of Medicine (HMed)

(510 Diehl Hall: 624-4416)

#### Medical School

Most textbooks for HMed courses are available at University of Minnesota Bookstore—Health Sciences (625-8600).

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in History of Medicine. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

*No HMed courses offered through Extension Classes 1995-96*

### History of Science and Technology (HSci)

(342E Physics: 624-7069)

#### Institute of Technology

Most textbooks for HSci courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

Jole Shackelford, Lecturer

Sara F. Tjossem, Lecturer

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in History of Science and Technology. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**HSci 1812 INTRODUCTION TO HISTORY OF SCIENCE: THE SCIENTIFIC REVOLUTION.** 4 credits, §HSci 3812, tuition\*: Resident \$318; Non-resident \$922.20. (IS)

The revival of ancient scientific thought in the Renaissance, and the overthrow of old ideas and methods in the Scientific Revolution of the 17th century. Focuses on how Copernicus, Kepler, Galileo, Harvey, and Newton emphasized an experimental approach to studying nature. (No prereq. Meets concurrently with 3812)

Fall Qtr, Sec 1, W, 6:20-8:50, Phys 210, Shackelford

**HSci 3812 INTRODUCTION TO HISTORY OF SCIENCE: THE SCIENTIFIC REVOLUTION.** 4 credits, §HSci 1812, tuition\*: Resident \$374; Non-resident \$1084.60.

See course description for 1812. (No prereq. Meets concurrently with 1812)

Fall Qtr, Sec 1, W, 6:20-8:50, Phys 210

**HSci 5244 HISTORY OF ECOLOGY AND ENVIRONMENTALISM.** 4 credits, §HSci 3244, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Historical development and interaction of ecology as an academic profession and as a political position: changing ideas of conservation, dust bowl era, atomic age, DDT controversy, biodiversity. (No prereq. Qualified students may register for graduate credit at the University of Minnesota.)

Fall Qtr, Sec 1, Th, 6-8:30, Ecology 150, StP Campus, Tjossem

### Home Economics Education

(See *Family Education* in Vocational and Technical Education)

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★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



## Honors Opportunities

(115 Johnston Hall: 624-5522)

### College of Liberal Arts

Textbooks for HSem courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

Gerald M. Erickson, Professor of Classical and Near Eastern Studies

Joyce Lyon, Professor of Art

Riki Kolbl Nelson, Instructor of Art

Special Honors Opportunities are offered by CLA through Extension Classes to all qualified Extension registrants to present appropriate challenges to highly motivated and intellectually superior students, to bring together the very best Extension students, and to provide students with close interaction with some of the University's outstanding faculty. Entry to Honors Opportunities is by special permission, with a 3.50 grade point average as the initial prerequisite.

**Honors Seminar (HSem):** Honors Seminars are one Honors opportunity. They are often of an interdisciplinary character, deal in some depth with topics not usually central to a regular course, and are intended for students not majoring in the discipline of the seminar instructor. Class size is small, and vigorous student participation is expected. Students with a GPA of at least 3.50 are invited to call the CLA Honors Office, 624-5522, to discuss their interest and qualifications.

**HSem 3050 JOURNEYING/JOURNALING: OUR LIVES IN IMAGE AND TEXT.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Making sense of the life journey is an ongoing challenge that calls upon all a person's resources. Visual language draws on certain ways of knowing, verbal languages on others. Combining these languages enriches the possibilities for exploration and expression. Through study of the work of artists for whom the interaction of image and text has been important, and through reading, writing, art making, and discussion, students attempt to become more attentive to their own journey and to the ways in which content, language, and visual form interact. Initially the focus will be on generating images (many methods may be used, among them gathering from existing sources, photocopying, creating them by hand), free writing exercises, and the selection and development of chosen material and sources. There will be field trips to the Minnesota Center for Book Arts and the artists' book collection at the Minneapolis College of Art and Design. The em-

phasis throughout will be on an interdisciplinary approach. Since no specific art or writing experience will be required (although curiosity about both is expected), students from all disciplines are welcome. Students will participate in a series of visual and writing exercises, such as visual/verbal collages, simple one-page broadsides, and multi-page artist's books. Through readings and class discussion, participants will develop methods and criteria for evaluating the work produced. This preparation will set the stage for a larger visual/textual project of the student's choice, which will be developed as a work in progress. (Prereq 3.50 GPA, special written  $\Delta$ . Limited to 15)

Fall Qtr, ★Sec 1, M, 6-10, ArtB 160, Lyon, Nelson

(See also CSch 0409, Photography as Text: Using Photos as Writing Prompts)

**HSem 3060 POLITICAL ASSASSINATIONS: ANCIENT AND MODERN.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

In very recent times a popular national leader was touring through one of his dominions. As the parade proceeded, shots rang out and the leader fell mortally wounded. The killing took place before thousands of onlookers and was photographed by still and movie cameras. The "assassin" was apprehended within hours of the event. The successor to the leader appointed a commission of high-ranking citizens to investigate the assassination. The news media covered this event in minute detail. Yet four years after the assassination, a national public opinion poll revealed that 70% of the population did not believe that they had received the truth about this event, and hundreds of books and articles giving varying interpretations of this assassination of John F. Kennedy have continued to appear. This assassination will be examined and analyzed along with other historically significant assassinations: Gaius and Tiberius Gracchus, Julius Caesar, Abraham Lincoln, Sacco and Vanzetti, and Martin Luther King. The historical context of each assassination will be considered, how and what is known about it, why there are so many interpretations, and why in each case it has been so difficult to ascertain the truth. (Prereq 3.50 GPA, special written  $\Delta$ . Limited to 15)

Winter Qtr, ★Sec 1, T, 6:20-8:50, FolH 114, Erickson

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

### Horticultural Science (Hort)

(305 Alderman Hall: 624-4242)

#### College of Agricultural, Food, and Environmental Sciences

Textbooks for most Hort courses are available at University of Minnesota Bookstore—St. Paul (624-9200).

(See also Landscape Architecture; Botany; and Gardening and Landscaping in Practical Scholar noncredit section)

N. Anderson, Instructor  
Peter D. Ascher, Professor  
David W. Davis, Professor  
Anne Hanchek, Assistant Professor  
Leonard Hertz, Professor  
Peter Moe, Instructor  
D. B. White, Professor  
Michael Zins, Assistant Professor

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Horticultural Science. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**Hort 1010 HOME HORTICULTURE.** 4 credits, tuition\* (includes \$10 course fee): Resident \$328; Non-resident \$932.20. (IS)

For non-horticulture majors. Fundamental concepts of plant identification, growth, and culture with practical applications to home landscape, floral design, house plants, and fruit, flower, and vegetable gardening. Lecture and laboratory. (No prereq)

Fall Qtr, Sec 1, W, 6:10-9:30, HrG 172, StP Campus, Moe

(See also PSch 0954, Across the Seasons: Designing Gardens for Year-Round Beauty)

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 1020 FLORAL DESIGN.** 4 credits, tuition\* (includes \$45 course fee): Resident \$363; Non-resident \$967.20.

Design for use in commercial flower shops or at home, including principles and elements of design, wedding and funeral arrangements, corsages, and the decorative use of dried materials. (No prereq. Limited to 20)

Fall Qtr, ★Sec 1, Th, 6-9:20, AlderH 415 (Lecture), StP Campus, Anderson (Lab meets in AlderH 423)

Winter Qtr, ★Sec 2, W, 6-9:20, AlderH 415 (Lecture), StP Campus, Anderson (Lab meets in AlderH 423)

**Hort 1021 WOODY PLANT MATERIALS.** 5 credits, tuition\*: Resident \$397.50; Non-resident \$1152.75.

Taxonomy, ecology, and landscape use of trees, shrubs, and evergreens. Lectures, laboratories, and field trips. (No prereq. Limited to 30)

Spring Qtr, ★Sec 1, TTh, 6-9 (plus arr), Snyder Research and Education Bldg, Minnesota Landscape Arboretum (West of Rt 41 on Hwy 5), Chanhassen, Zins. (Books available at Arboretum Gift Shop and at Books Underground on the St. Paul campus)

(See also PSch 0961, Selecting Trees, Shrubs, and Vines for Your Home and Garden)

**Hort 1022 HERBACEOUS LANDSCAPE PLANTS.** 5 credits, tuition\*: Resident \$397.50; Non-resident \$1152.75.

Taxonomy, ecology, and landscape use of perennial and annual flowers, ferns, weeds, tender and hardy bulbs, grasses, herbs, and native plants. Lectures, laboratory, field trips, and garden experience. *Course packet required.* (No prereq. Limited to 30)

Spring Qtr, ★Sec 1, TTh, 6-9 (plus arr), AlderH 415, StP Campus, Hanchek

**Hort 1036 PLANT PROPAGATION.** 5 credits, tuition\* (includes \$5 course fee): Resident \$402.50; Non-resident \$1157.75.

Principles and techniques of propagating plants by seeds, cuttings, grafts, buds, layers, division and plant tissue culture. Lectures on principles; laboratories on practice of various propagating techniques. (No prereq. Limited to 20)

Fall Qtr, ★Sec 1, TTh, 5:10-8:10, HrG 172, StP Campus, Ascher

Winter Qtr, ★Sec 2, TTh, 6:15-9:15, HrG 172, StP Campus, Ascher (Limit 30)

(See also PSch 0964, Propagating Wildflowers and Native Plants)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**Hort 3031 FRUIT SCIENCE.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45.

Principles of tree and small fruit production in temperate climates. Site selection, cultural and management practices, physiological and environmental control of plant development, dwarfing, growth regulating compounds, pest and weed control. Lecture and laboratory. (No prereq)

Winter Qtr, Sec 1, W, 6:20-9:30, HrG 172, StP Campus, Hertz

(See also REX 0120, Breeding and Producing Fruit Crops in Minnesota)

**Hort 3072 TURF MANAGEMENT.** 4 credits. Tentatively scheduled for winter 1997.

**Hort 5034 COMMERCIAL VEGETABLE AGRICULTURE.** 5 credits, tuition\*: Resident \$467.50; Non-resident \$1355.75; Resident Graduate credit \$590; Non-resident Graduate credit \$1298; Resident Graduate School credit \$1077.50; Non-resident Graduate School credit \$2370.50.

Crop cultural and product handling and use systems in various world regions. History and evolution of species and product development. Seed and stand establishment; propagation; pest management. Applied physiology and genetics of fruit, bulb, tuber initiation; sink development, maturation and quality. Lectures, laboratories and field trips. (Prereq 3002 or Agro 1010, Soil 3125. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr, ØSec 1, MW, 4-6 (plus art), HrG 172, StP Campus, Davis

## Hospital and Health Care Administration

For information on noncredit conferences or workshops in hospital and ambulatory care administration, please contact Vernon Weckwerth, Box 97 Mayo, telephone 624-0603; or M. Perron, 624-1411.

## Housing

See Design, Housing and Apparel

## College of Human Ecology

Courses are listed under the following units:

### Design, Housing, and Apparel

Includes courses in Clothing Design, Design Communication, Housing, Interior Design, and Retail Merchandising majors.

### Family Social Science

Includes Alcohol and Drug Counseling Education

### Food Science and Nutrition

### Social Work

### Youth Studies

For information about credit courses given in suburban or out-state locations please write or call the College of Human Ecology, 32 McNeal Hall, 1985 Buford Avenue, University of Minnesota, St. Paul, MN 55108; telephone (612) 624-1717.

## Humanities (Hum)

(355 Ford Hall: 625-6563)

### College of Liberal Arts

Textbooks for most Hum courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

(See also *Social Sciences, Public Issues, and Humanities* in Compleat Scholar noncredit section)

Frank Akehurst, Professor of French and Italian  
Ayers L. Bagley, Professor, Educational Policy and Administration

Jackson Hershbell, Professor of Classical and Near Eastern Studies

George Kliger, Assistant Professor

James Norwood, Associate Professor, Theatre Arts and Dance

Richard Rudolph, Professor, Institute of International Studies

David Shupe, Lecturer

Robert B. Tapp, Professor

James Tracy, Professor of History

**Most of the courses for a minor in Humanities can be completed in the evening.**

### Requirements for a Humanities minor

25 credits: One course from the Introduction to Western Civilization sequence (Hist 1021, 1022, 1023 or Hist 1021H, 1022H, 1023H) (5 credits). Three courses from the European Heritage and Modern West sequences (12 credits); two additional 3xxx-5xxx Humanities courses (8 credits). The minor program must be approved by the Humanities Curriculum Coordinator. Not more than one Humanities course in the Minor course program may be taken at the 1xxx level. Not more than one course at the 3xxx-5xxx level in the minor program may be taken on a Directed Study, Directed Instruction or Independent Study basis. Not more than one course at the 3xxx-5xxx level in the Minor program may be taken on an S-N basis. All courses must be completed with a grade of C or higher (exception: one course may be completed with a grade of S).

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Humanities. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**Continuing Education for Women (CEW) section available in the following course:** Hum 1003, Hum 3003

**You need not be minoring in Humanities to register for these classes.**

**Hum 1001 HUMANITIES IN THE MODERN WEST I.** 4 credits, §3001, §Rhet 1301, tuition\*: Resident \$318; Non-resident \$922.20. (IS)

Eighteenth-century Europe. Old Regime through French Revolution and Napoleon; new science, Enlightenment, cult of sensibility; rococo, neoclassicism, incipient romanticism. Integrative study of works by creative figures such as Pope, Voltaire, Rousseau, Diderot, Goethe, Watteau, Boucher, Hogarth, David, Goya, Mozart, Haydn. (No prereq. Meets concurrently with 3001)

Fall Qtr, Sec 1, M, 6:20-8:50, BlegH 135, Tracy

**Hum 1002 HUMANITIES IN THE MODERN WEST II.** 4 credits, §3002, §Rhet 1302, tuition\*: Resident \$318; Non-resident \$922.20. (IS)

Romanticism, liberalism, socialism; Industrial Revolution, materialism, cult of the individual and some counterstatements; realism, naturalism. Integrative study of works by creative figures such as Wordsworth, Byron, Adam Smith, Bentham, Marx, Mill, Stendhal, Flaubert, Ibsen, Dostoevsky, Delacroix, Courbet, Daumier, Beethoven, Berlioz, Liszt. (No prereq. Meets concurrently with 3002)

Winter Qtr, Sec 1, W, 6:20-8:50, BlegH 255, Rudolph

**Hum 1003 HUMANITIES IN THE MODERN WEST III.** 4 credits, §3003, §Rhet 1303, tuition\*: Resident \$318; Non-resident \$922.20. (IS)

Impact of science, especially evolution theory, on religious and humanistic thought; roots of existentialism; disorientation in modern culture; impressionism. Integrative study of selected works by creative figures such as Kierkegaard, Darwin, Nietzsche, Chekhov, Joyce, Mann, Manet, Monet, Renoir, Degas, Wagner, Debussy, Mahler. (No prereq. Meets concurrently with 3003)

Winter Qtr, Sec 1, Th, 9:30 a.m.-12, MacP, Tapp.

*Offered through Continuing Education for Women*

Spring Qtr, Sec 2, T, 6:20-8:50, FolH 104, Shupe

**Hum 1004 HUMANITIES IN THE MODERN WEST IV.** 4 credits, §Hum 3004, §Rhet 3381, tuition\*: Resident \$318; Non-resident \$922.20.

Europe, 1914-1940. Ideas and forms of society and culture: Leninist, fascist-Nazi, Freudian, neo-orthodox. Expressionism, dada, surrealism. Integrative study of works by creative figures such as Lenin, Freud, Kafka, Eliot, Duchamp, Klee, Kollwitz, Dali, Picasso, Stravinsky, Schönberg, Bartók, Wright, Gropius. (No prereq. Meets concurrently with 3004)

Fall Qtr, Sec 1, W, 6:20-8:50, FordH 55, Klinger

**Hum 1005 HUMANITIES IN THE MODERN WEST V.** 4 credits, §Hum 3005, tuition\*: Resident \$318; Non-resident \$922.20.

The Western world, 1940-1970. Existentialism, "the absurd;" searches for identity, commitment; religious trends; influence of oriental spiritual traditions. Integrative study of works by such creative figures as Camus, Sartre, Ionesco, Bultmann, Watts, Pollock, Warhol, Stockhausen, Cage, LeCorbusier, Fellini. (No prereq. Meets concurrently with 3005)

Winter Qtr, Sec 1, W, 6:20-8:50, FordH 55, Klinger

**Hum 1113 EUROPEAN HERITAGE: ROME.** 4 credits, §3113, §Rhet 3322, tuition\*: Resident \$318; Non-resident \$922.20. (IS)

Roman civilization of the late republic and empire; rise of Christianity. Literature, religion, philosophy, art, architecture. Integrative study of selected works influential in modern Western culture; Caesar, Lucretius, Virgil, Ovid, Seneca, Petronius, Augustine, Boethius. (No prereq. Meets concurrently with 3113)

Winter Qtr, Sec 1, M, 6:20-8:50, FordH 120, Hershbell

**Hum 1115 EUROPEAN HERITAGE: MIDDLE AGES.** 4 credits, §3115, §CivCv 3950, §MeSt 3610, §Rhet 3322, tuition\*: Resident \$318; Non-resident \$922.20.

Sixth to 14th centuries: growth of Christendom; monasticism, feudalism and courtly love; rise of towns and universities. Art and architecture: Byzantine, Romanesque, and Gothic. Music: Gregorian chant, minstrelsy, liturgical drama. Literature: epic, romance; Dante. Islam. Scholastic philosophy: Abelard, Aquinas. (No prereq. Meets concurrently with 3115, MeSt 3610 sec 3)

Spring Qtr, Sec 1, M, 6:20-8:50, FordH 160, Akehurst

(See also CSch 0301, Merry Medieval Life in Britain, Ireland, and Scandinavia)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**Hum 1117 EUROPEAN HERITAGE: RENAISSANCE, REFORMATION.** 4 credits, §3117, §Rhet 3323, tuition\*: Resident \$318; Non-resident \$922.20.

Civilization in 15th- and 16th-century Italy; religious and cultural reaction in northern Europe. Scientific naturalism, individualism, humanism. Writings: Petrarch, Machiavelli, Castiglione, Erasmus, Luther, Calvin, Montaigne, Marlowe. Arts: Botticelli, Michelangelo, Leonardo, Raphael. Music: Dufay, Josquin, Lasso. (No prereq. Meets concurrently with 3117)

Spring Qtr, Sec 1, Th, 6:20-8:50, BlegH 150, Norwood

**Hum 3001 HUMANITIES IN THE MODERN WEST I.** 4 credits, §1001, §Rhet 1301, tuition\*: Resident \$344; Non-resident \$997.60. (IS)

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

Fall Qtr, Sec 1, M, 6:20-8:50, BlegH 135, Tracy

**Hum 3002 HUMANITIES IN THE MODERN WEST II.** 4 credits, §1002, §Rhet 1302, tuition\*: Resident \$344; Non-resident \$997.60.

See course description for Hum 1002. (No prereq. Meets concurrently with 1002)

Winter Qtr, Sec 1, W, 6:20-8:50, BlegH 255, Rudolph

**Hum 3003 HUMANITIES IN THE MODERN WEST III.** 4 credits, §1003, §Rhet 1303, tuition\*: Resident \$344; Non-resident \$997.60.

See course description for Hum 1003. (No prereq. Meets concurrently with 1003)

Winter Qtr, Sec 1, Th, 9:30 a.m.-12, MacP, Tapp.  
*Offered through Continuing Education for Women*

Spring Qtr, Sec 2, T, 6:20-8:50, FolH 104, Shupe

**Hum 3004 HUMANITIES IN THE MODERN WEST IV.** 4 credits, §Hum 1004, §Rhet 3381, tuition\*: Resident \$344; Non-resident \$997.60. (IS)

See course description for Hum 1004. (No prereq. Meets concurrently with 1004)

Fall Qtr, Sec 1, W, 6:20-8:50, FordH 55, Kliger

**Hum 3005 HUMANITIES IN THE MODERN WEST V.** 4 credits, §Hum 1005, tuition\*: Resident \$344; Non-resident \$997.60.

See course description for Hum 1005. (No prereq. Meets concurrently with 1005)

Winter Qtr, Sec 1, W, 6:20-8:50, FordH 55, Kliger

**Hum 3101 FOUNDATIONS OF MODERN EDUCATION.** 4 credits, §5101, §EdPA 3101, 5101, tuition\*: Resident \$344; Non-resident \$997.60.

Background course for all other courses in the history and philosophy of education. Analysis and interpretation of important elements in modern education derived from the Greeks, the Romans, the Middle Ages, and the Renaissance. (No prereq. Meets concurrently with 5101, EdPA 3101, 5101. A joint Day/Extension class limited to a combined total of 15 Extension students)

Fall Qtr, ★○Sec 1, M, 4:30-7, WullH 140, Bagley

**Hum 3113 EUROPEAN HERITAGE: ROME.** 4 credits, §1113, §Rhet 3322, tuition\*: Resident \$344; Non-resident \$997.60. (IS)

See course description for Hum 1113. (No prereq. Meets concurrently with 1113)

Winter Qtr, Sec 1, M, 6:20-8:50, FordH 120, Hershbell

**Hum 3115 EUROPEAN HERITAGE: MIDDLE AGES.** 4 credits, §1115, §CICv 3950, §MeSt 3610, §Rhet 3322, tuition\*: Resident \$344; Non-resident \$997.60.

See course description for Hum 1115. (No prereq. Meets concurrently with 1115, MeSt 3610 sec 3)

Spring Qtr, Sec 1, M, 6:20-8:50, FordH 160, Akehurst

**Hum 3117 EUROPEAN HERITAGE: RENAISSANCE, REFORMATION.** 4 credits, §1117, §Rhet 3323, tuition\*: Resident \$344; Non-resident \$997.60.

See course description for Hum 1117. (No prereq. Meets concurrently with 1117)

Spring Qtr, Sec 1, Th, 6:20-8:50, BlegH 150, Norwood

**Hum 3155 HISTORY OF WESTERN EDUCATIONAL THOUGHT.** 4 credits, §Hum 5155, EdPA 3155, 5155, tuition\*: Resident \$344; Non-resident \$997.60.

Major educational classics of Western civilization: Plato, Aristotle, Cicero, Quintillian, Montaigne, Milton, Locke, Rousseau, and others. (No prereq. Meets concurrently with 5155, Hum 3155, 5155. A joint Day/Extension class limited to a combined total of 15 Extension students)

Winter Qtr, ★○Sec 1, T, 4:30-7, WullH 140, Bagley

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Hum 3910 TOPICS IN THE HUMANITIES: UTOPIAS AND DYSTOPIAS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Explores a variety of visions of an ideal society (utopia) and its opposite (dystopia) in the writings of philosophers, novelists, psychologists, and social and cultural critics through the ages, from Plato to Orwell, to feminist perspectives. With regard to each vision, topics such as fundamental assumptions about human nature, ideals and values worthy of implementation, the nature of human institutions and their potentials for good and evil, will be examined. A central concern of the seminar will be to assess the degrees of actual or potential correspondence of these visions to the real world of individual and social existence. (Prereq jr or sr or #. Meets concurrently with 5910. Limited to a combined total of 15)

Spring Qtr, ★Sec 1, W, 6:20-8:50, FordH 359, Kliger

**Hum 5101 FOUNDATIONS OF MODERN EDUCATION.** 4 credits, \$3101, \$EdPA 3101, 5101, tuition\*: Resident \$344; Non-resident \$997.60. Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

See course description for Hum 3101. (No prereq. Meets concurrently with 3101, EdPA 3101, 5101. A joint Day/Extension class limited to a combined total of 15 Extension students)

Fall Qtr, ★Sec 1, M, 4:30-7, WullH 140, Bagley

**Hum 5155 HISTORY OF WESTERN EDUCATIONAL THOUGHT.** 4 credits, \$Hum 3155, tuition\*: Resident \$344; Non-resident \$997.60. Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

See course description for Hum 3155. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3155, EdPA 3155, 5155. A joint Day/Extension class limited to a combined total of 15 Extension students)

Winter Qtr, ★Sec 1, T, 4:30-7, WullH 140, Bagley

**Hum 5910 TOPICS IN THE HUMANITIES: UTOPIAS AND DYSTOPIAS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60. Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

See course description for Hum 3910. (Prereq jr or sr or #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3910. Limited to a combined total of 15)

Spring Qtr, ★Sec 1, W, 6:20-8:50, FordH 359, Kliger

## Human Relations

See EPsy 5135, Workshop in Human Relations

## Human Resource Development

See Vocational and Technical Education

## Industrial Education

(See *Business and Industry Education* in Vocational and Technical Education)

## Industrial Engineering/ Operations Research (IEOR)

(121 Mechanical Engineering: 625-5842)

### Institute of Technology

Textbooks for most IEOR courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

Sant R. Arora, Professor of Mechanical Engineering

Edward Barnett, Lecturer in Mechanical Engineering  
Shahrukh A. Irani, Assistant Professor in Mechanical Engineering

Russell D. Melton, Lecturer

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in IEOR. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**IEOR 3000 (formerly IEOR 5000) INTRODUCTION TO INDUSTRIAL ENGINEERING ANALYSIS.** 4 credits, \$IEOR 5000, tuition\*: Resident \$374; Non-resident \$1084.60.

Elements of manufacturing and production systems, types of industrial problems solved by the industrial engineer, programming, artificial intelligence techniques, methods engineering for process improvement, critical path method, and PERT, fundamentals of engineering economy, cost estimation, value engineering, concurrent engineering, design for manufacture. Applications may include production scheduling, facility layout, quality engineering, manufacturing automation, product design. (Prereq Math 1252. May not be taken for graduate credit)

Spring Qtr, Sec 1, Th, 6:10-9:10, MechE 221, Barnett, Irani

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**IEOR 5020 ENGINEERING COST ACCOUNTING, ANALYSIS AND CONTROL.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40. Basic accounting concepts, financial statements, analysis and control of current assets such as cash, receivables, and inventory; income tax planning, cost analysis, standard costs for product costing, time value of money, quantification of risk and uncertainty, utility theory, cost of capital and capital structure, capital budgeting under capital rationing, management decisions, and investment decisions. (Prereq 3000 and ME 3900 recommended. May not be taken for graduate credit by IEOG grad students)

Fall Qtr, Sec 1, Th, 6:10-9:10, LindH 302, Barnett

**IEOR 5030 QUALITY ENGINEERING.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40. Definition of quality, quality strategy, economics of quality, quality improvement teams, improvement methodologies, the 7 QC tools, control charts, rational sampling, process capability analysis, quality in product design, quality function deployment, total quality management. Deming management methods. (Prereq IT or grad student, Math 1261, ME 3900. IEOG 3000 recommended. May not be taken for graduate credit by IEOG grad students)

Spring Qtr, Sec 1, W, 6:10-9:10, Arch 50, Arora

**IEOR 5311 MANAGEMENT FOR ENGINEERS.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Historical development of management concepts; organizational systems and authority relationships; planning, communication and management responsibility. (Prereq IT student or grad, 3000. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr, Sec 1, Th, 6:10-9, MechE 221, Barnett

**IEOR 5321 INDUSTRIAL SAFETY.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40. Definition and philosophy of safety, safety training, safety requirements for production processes, equipment and plants, industry standards, safety devices, and product safety. (Prereq IT student or grad;

IEOR 3000. Qualified students may register for graduate credit at the University of Minnesota. Limited to 35)

Spring Qtr, ★Sec 1, Th, 6:10-9, Arch 20

**IEOR 5351 ANALYSIS OF PRODUCTION PROCESSES.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Problems in production engineering and production management. Analysis of production problems from selected industries. Development of ability to recognize and diagnose industrial problems. (Prereq IT student or grad; IEOG 5020; background in all basic industrial engineering areas [3000, 5010, 5030, 5040] recommended. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr, Sec 1, M, 6:10-9, MechE 221, Barnett

## Industrial Relations (IR)

(537 Management/Economics: 624-2500)

### Carlson School of Management

Textbooks for most IR courses are available at University of Minnesota Bookstore—West Bank (625-3000).

(See also Spch 5441, Communication in Human Organizations; and Economics)

- Dawn Addy, Lecturer
- Ross E. Azevedo, Associate Professor
- James W. Beaton, Lecturer
- Charles H. Davis, Lecturer
- Kenneth L. Gagala, Lecturer
- Raymond A. Noe, Associate Professor
- Jolanta Sears, Lecturer
- Robert T. Weaver, Associate Professor, Bethel College

Your attention is called to the Industrial Relations Certificate program. See the Degrees and Certificates section of this Bulletin.

**Evening Master of Arts in Industrial Relations program**—an evening program is offered in Plan A (thesis) or Plan B (non-thesis). Students usually enroll for up to 8 credits a quarter and can complete the program within 8 quarters. Applicants are required to submit scores from the General Aptitude section of the Graduate Record Examination. For GRE information, call (612) 624-3323. For further information about the master's program, call Edie French at (612) 624-5810; or write the Director of Graduate Studies, Industrial Relations Center, University of Minnesota, 271 19th Ave. S., Minneapolis, MN 55455.

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Business degree students must take Industrial Relations courses A-F.**

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in IR. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**Note:** Students taking Carlson School of Management upper division undergraduate courses through CEE are expected to have completed the equivalent of 90 quarter college credits with a minimum of a "B-" grade average.

**IR 0001C SUPERVISION I: ELEMENTS OF SUPERVISION.** 3 certificate credits. **Tentatively scheduled for 1996-97.**

**IR 0002C SUPERVISION II: ADVANCED TECHNIQUES OF SUPERVISION.** 3 certificate credits. **Tentatively scheduled for 1996-97.**

**IR 3000 LABOR ARBITRATION.** 4 degree credits. **Tentatively scheduled for 1996-97.**

**IR 3000 POLICY AND PRACTICE IN LABOR LAW.** 4 credits. **Tentatively scheduled for 1996-97.**

**IR 3000 COLLECTIVE BARGAINING: THE PUBLIC SECTOR.** 4 credits. **Tentatively scheduled for 1996-97.**

**IR 3002 PERSONNEL AND INDUSTRIAL RELATIONS.** 4 credits, §8002, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60.

An introduction to the human resource management function in organizations. Coverage includes the labor market, recruitment, selection, training, compensation, and labor relations. Topics to be covered are the changing nature of the world of work, emerging legal issues, discrimination in pay and employment, comparable worth, work performance and its assessment, and the effects of technological change on jobs and employment. Involves lecture presentations, discussion, case studies, and simulation exercises. (Prereq at least 90 credits completed or in progress; Econ 1101, Econ 1102, Psy 1001. Sec 2 meets concurrently with IR 8002. Limited to 65)

Fall Qtr, ★Sec 1, Th, 6-9, BlegH 250

Winter Qtr, ★Sec 2, T, 6-9, AndH 330 (Limited to a combined total of 65)

Spring Qtr, ★Sec 3, T, 6-9, BlegH 215

**IR 3007 COLLECTIVE BARGAINING AND LABOR RELATIONS.** 4 credits, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60. (IS)

Analysis of the roles of unions and collective bargaining in contemporary American society. Topics covered include negotiations and related policies and practices of employers, employees, unions, legislative bodies, and the public in dealing with questions of worker representation in the private sectors. Coverage includes impact and transference of collective bargaining principles from the union sector to the non-union sector. Involves lecture presentations, discussion, case studies, and bargaining simulations. (Prereq at least 90 credits completed or in progress)

Spring Qtr, Sec 1, M, 6-9, HHCtr 20

**IR 3010 THE INDIVIDUAL IN THE ORGANIZATION.** 4 credits, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60.

An introduction to the human side of organizations, focusing on workers and how they enter and succeed in the work setting. Coverage includes theories and techniques of employment interviewing; training needs analysis; career planning; management development; turnover, out-placement, and retirement; understanding leadership roles and styles; work motivation, organization culture and job design; and planning for change. Involves lecture presentations, discussion, case studies, and simulation exercises. (Prereq at least 90 credits completed or in progress)

Fall Qtr, Sec 1, W, 6-9, SocSci 1383

Winter Qtr, Sec 2, Th, 6-9, BlegH 210

(See also REX 0607, Impact of Procedural Justice on Employee Behavior)

**IR 5000 PERSONNEL AND INDUSTRIAL RELATIONS LAW.** 4 credits, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60; Resident Graduate credit \$488; Non-resident Graduate credit \$1054.40; Resident Graduate School credit \$878; Non-resident Graduate School credit \$1912.40.

Designed for the student who needs to understand the growing body of laws and their application to the workplace. Human rights, equal employment, compensation and benefit laws, employee protection laws, labor relations laws, as well as special issues such as wrongful discharge, sexual harassment, defamation, are discussed in the context of Minnesota Federal statutes, case law and their application in the work setting. (Prereq at least 90 credits completed or in progress. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr, Sec 1, M, 6-9, SocSci 101, Beaton

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



**IR 5000 INTERNATIONAL PERSONNEL AND INDUSTRIAL RELATIONS PRACTICES.** 4 credits, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60; Resident Graduate credit \$488; Non-resident Graduate credit \$1054.40; Resident Graduate School credit \$878; Non-resident Graduate School credit \$1912.40.

Designed for the student who needs to understand how the American practices of personnel and industrial relations compare with those practices internationally. Laws, selection, performance management, compensation, and training and development are discussed. (Prereq at least 90 credits completed or in progress. Qualified students may register for graduate credit at the University of Minnesota)  
Winter Qtr, Sec 2, W, 6-9, SocSci 101, Beaton

**IR 5000 MANAGING DIVERSITY.** 4 credits, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60; Resident Graduate credit \$488; Non-resident Graduate credit \$1054.40; Resident Graduate School credit \$878; Non-resident Graduate School credit \$1912.40.

To manage diverse employees, managers should ask themselves if they are fully tapping the potential capacities of everyone in their department; and if not, if this failure is hampering their ability to meet performance standards. In this course, students investigate diversity and strategize ways to use it. They will examine the theoretical debates surrounding the work force participation of women and minorities as well as the historical position of these groups in the labor force. Through analysis of trait theory and other leadership theories, they explore social phenomena which contribute to the continuation of discriminatory practices. Such practices and the laws surrounding them will be examined. These practices will be framed with a systems, paradigmatic analysis. Students will have the opportunity to examine the formation of their own value systems, learn methods to modify their behavior, and enhance their abilities to manage and utilize diversity. (Prereq at least 90 credits completed or in progress. Qualified students may register for graduate credit at the University of Minnesota. Limited to 35)

Spring Qtr, ★Sec 3, W, 6-9, BlegH 120, Addy

**IR 5000 EMPLOYEE PERFORMANCE: DESIGN APPRAISAL AND MANAGEMENT.** 4 credits, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60; Resident Graduate credit \$488; Non-resident Graduate credit \$1054.40; Resident Graduate School credit \$878; Non-resident Graduate School credit \$1912.40.

Designed for the student who needs to understand how work and employee performance are orga-

nized, appraised, and managed in the firm for employee satisfaction and to meet the goals of the firm. Job design standards, employee appraisal systems, and worker satisfaction are discussed. (Prereq at least 90 credits completed or in progress. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr, Sec 4, Th, 6-9, RarigC 610, Beaton

**IR 5002 SYSTEMS OF CONFLICT AND DISPUTE RESOLUTION.** 4 credits, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60; Resident Graduate credit \$488; Non-resident Graduate credit \$1054.40; Resident Graduate School credit \$878; Non-resident Graduate School credit \$1912.40.

Theoretical and practical treatment of the settlement of conflict in interpersonal, work-related, community, business, and international settings. Includes lecture presentations, discussion, observation of actual dispute resolution sessions, and laboratory exercises, with participation in various dispute resolution simulations applied to real world conflicts. (Prereq at least 90 credits completed or in progress. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension students)

Fall Qtr, ★Sec 1, T, 5:30-9, HHCtr 20

**IR 8000 LABOR ARBITRATION.** 4 credits. Tentatively scheduled for 1996-97.

**IR 8000 POLICY AND PRACTICE IN LABOR LAW.** 4 credits. Tentatively scheduled for 1996-97.

**IR 8000 COLLECTIVE BARGAINING: THE PUBLIC SECTOR.** 4 credits. Tentatively scheduled for 1996-97.

**IR 8002 PERSONNEL AND INDUSTRIAL RELATIONS.** 4 credits, tuition\* (includes \$16 special fee): Resident Graduate School credit \$878; Non-resident Graduate School credit \$1912.40.

See description for IR 3002. (Prereq Econ 1101, 1102, Psy 1001. Open only to students admitted to the University of Minnesota Graduate School. Meets concurrently with IR 3002, sec 2. Limited to a combined total of 65)

Winter Qtr, ★Sec 1, T, 6-9, AndH 330

## Certified Employee Benefits Specialist (CEBS)

See Employee Benefits Specialist section of this bulletin.

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

### Information and Decision Sciences (IDSc)

(395 Humphrey Center: 624-8030)

#### Carlson School of Management

Textbooks for most Information and Decision Sciences courses are available at University of Minnesota Bookstore—West Bank (625-3000).

(See also Operations and Management Science)

Carl Adams, Professor  
Norm Chervany, Professor  
Shawn Curley, Associate Professor  
Fred Davis, Associate Professor  
Gordon Davis, Professor  
Gretchen Donahue, Lecturer  
Ted Dunnington, Teaching Specialist  
Gordon Everest, Associate Professor  
Dale Goodhue, Assistant Professor  
Milda Hedblom, Visiting Professor  
Thomas Hoffmann, Professor  
Paul Johnson, Professor  
James Judisch, Lecturer  
Rob Kauffman, Associate Professor  
Douglas C. Lund, Lecturer and Coordinator  
Salvatore T. March, Professor  
J. David Naumann, Associate Professor  
Jae Song, Visiting Professor  
Robert Van Cleave, Lecturer and Coordinator, MBA Program  
Les Wanninger, Lecturer and Coordinator, Extension Classes  
Arnie Wentland, Teaching Specialist  
James Wetherbe, Professor

Courses in the IDSc area make up a program designed for students with a variety of backgrounds:

1. Undergraduates in the Carlson School or other schools who want one or more IDSc courses as electives
2. Working students who want IDSc electives or an information technology-focused emphasis program as part of their mid-career education, but who are not necessarily working toward a degree
3. Undergraduate Carlson School business majors who want to focus on information technology in a self-designed emphasis program as part of their Carlson School B.S.B. degree

#### Starting Points

Students who have been accepted into, or who plan to apply to the Carlson School, should begin with the Core Courses of IDSc 1010 and IDSc 3030. IDSc 3030 is a requirement for Carlson School students as part of the B.S.B. program. IDSc 3030 is required prior to taking the other 3xxx and 5xxx

courses below. That requirement may be waived by the IDSc Extension coordinator (Les Wanninger, 624-8030) for those students who have equivalent experience.

#### Core Courses

This sequence of courses (IDSc 1010, IDSc 3030) is intended to help students develop the capability to acquire, analyze, and manage data as business professionals. The courses are a mix of skill development and general knowledge in information technology.

**Carlson School of Management degree students must take upper division (3xxx-5xxx) IDSc courses A-F.**

**Note:** Students taking Carlson School of Management upper division undergraduate courses through CEE are expected to have completed the equivalent of 90 quarter college credits with a minimum of a "B-" grade average.

**IDSc 1010 (formerly MSci 1010) FUNDAMENTALS OF INFORMATION DEVELOPMENT AND USE.** 4 credits, \$MSci 1010, tuition\* (includes \$16 special fee): Resident \$334; Non-resident 938.20.

Overview of the process of understanding, developing, and presenting data to support management decision making. Information development topics include management decision making and the need for the availability and proper use of data; measurement principles and data quality; methods for the acquisition of secondary and primary data including surveys, quasi-experimental, and true experiments, simulation, and time-oriented process models. Information use topics include methods for organizing, summarizing, interpreting, and presenting complex data types. Models of data analysis include data displays or graphics; exploratory data analysis; frequency distributions; measures of location, variability, and association; elementary probability operations; and time-oriented process models. **Must be taken A-F.** (Prereq 30 credits, Math 1111 or ¶1111. Limited to 45)

Fall Qtr, ★Sec 1 Lect, M, 5:30-8:15, BlegH 130;  
Rec, M, 8:15-9:15, BlegH 130

Fall Qtr, ★Sec 2, Lect, T, 5:30-8:15, ClaOff B35,  
StP Campus (Limit 36); Rec, T, 8:15-9:15,  
ClaOff B35, StP Campus

Fall Qtr, ★Sec 3, Lect, W, 5:30-8:15, BlegH 130;  
Rec, W, 8:15-9:15, BlegH 130

Winter Qtr, ★Sec 4, Lect, T, 5:30-8:15, BlegH  
130; Rec, T, 8:15-9:15, BlegH 130

Winter Qtr, ★Sec 5, Lect, W, 5:30-8:15, BlegH  
220; Rec, W, 8:15-9:15, BlegH 220

Spring Qtr, ★Sec 6, Lect, W, 5:30-8:15, BlegH  
140; Rec, W, 8:15-9:15, BlegH 140

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**IDSc 3030 (formerly MSci 3030) INFORMATION SYSTEMS AND INFORMATION MANAGEMENT.** 4 credits, §MSci 3030, §IDSc 3002, §MIS 3100, 5100, 3101, 3300, 5101, tuition\* (includes \$16 special fee); Resident \$390; Non-resident \$1100.60.

Defining information requirements. Developing information systems applications. Using information systems. Defining data structures and building and using databases. Formulating database retrievals. Building and using models and expert systems to support decision making. Obtaining external data to support model building and decision making. Evaluating information. Skill development in database software. This course is equivalent to MIS 3100, 5100, 3101, 3300, and 5101. *Limits are strictly enforced due to facility limitations. No permission to register will be given when a section closes. Must be taken A-F.* (Prereq IDSc 1010. Limited to 25) Fall Qtr, ★Sec 1, Lect, M, 5:30-8:15, BlegH 440; Lab, M, 8:15-9:15, BlegH 440

Fall Qtr, ★Sec 2, Lect, W, 5:30-8:15, BlegH 440; Lab, W, 8:15-9:15, BlegH 440

Winter Qtr, ★Sec 3, Lect, W, 5:30-8:15, BlegH 440; Lab, W, 8:15-9:15, BlegH 440

Spring Qtr, ★Sec 4, Lect, T, 5:30-8:15, BlegH 440; Lab, T, 8:15-9:15, BlegH 440

Spring Qtr, ★Sec 5, Lect, W, 5:30-8:15, BlegH 440; Lab, W, 8:15-9:15, BlegH 440

**IDSc 3132 (formerly MIS 3132) DATA COMMUNICATIONS SYSTEMS.** 4 credits, §MIS 3132, tuition\* (includes \$16 special fee); Resident \$390; Non-resident \$1100.60.

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. *Open to nondegree students with equivalent experience.* (Prereq 5102 and at least 90 credits completed or in progress. Limited to 37)

Winter Qtr, ★Sec 1, T, 5:30-9, BlegH 225, Naumann

**IDSc 3142 TELECOMMUNICATIONS: DOMESTIC AND INTERNATIONAL POLICY AND REGULATION.** 4 credits, tuition\* (includes \$16 special fee); Resident \$390; Non-resident \$1100.60.

An overview of regulation and policy making in telecommunications. Background and evolution of the industry. Industry structure: equipment producers, services; telephony, broadcast and cable, mobile, satellites, data networks, information services. Models for policy: regulated monopolies and competitive services. The roles and relationships of

U.S. standards organizations, the telecommunications industry, the federal government, and the states and other governmental units. Evolution of international telecommunications organizations and regulatory systems, with emphasis on Europe and the Asia-Pacific community. Analysis of current issues in regulation and communications convergence such as information society infrastructure, privacy, and encryption, and intellectual property rights. *Open to nondegree students with equivalent experience.* (Prereq 3030 or equivalent and at least 90 credits completed or in progress. Limited to 37) Spring Qtr, ★Sec 1, M, 5:30-9, Law 1, Hedblom

**IDSc 5102 INTRODUCTION TO INFORMATION SYSTEMS ANALYSIS.** 4 credits, §MIS 5102, tuition\* (includes \$16 special fee); Resident \$390; Non-resident \$1100.60; Resident Graduate credit \$488; Non-resident Graduate credit \$1054.40; Resident Graduate School credit \$878; Non-resident Graduate School credit \$1912.40.

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. *Open to nondegree students with equivalent experience. Must be taken A-F.* (Prereq 3030 or 3001 or 3002 and at least 90 credits completed or in progress. Qualified students may register for graduate credit at the University of Minnesota. Credits may not be applied to the MBA program. Limited to 37)

Fall Qtr, ★Sec 1, T, 5:30-9, RarigC 610, Naumann  
**IDSc 5103 DATABASE DESIGN, MANIPULATION, AND MANAGEMENT.** 4 credits, tuition\* (includes \$16 special fee); Resident \$390; Non-resident \$1100.60; Resident Graduate credit \$488; Non-resident Graduate credit \$1054.40; Resident Graduate School credit \$878; Non-resident Graduate School credit \$1912.40.

Use of computer technology and software to represent, manipulate, and manage data. For users of databases and DBMS. Facilities for ad hoc interactive use and system development. Principles and techniques of logical database design. Introduction to physical representation and storage of data in a computer system. Database management system (DBMS) tools to manage data and high-level languages to retrieve and manipulate data. *Open to nondegree students with equivalent experience. Must be taken A-F.* (Prereq IDSc 3030 or IDSc 3001 or 3002. Qualified students may register for graduate credit at the University of Minnesota. Credits may not be applied to the MBA program. Limited to 37)

Winter Qtr, ★Sec 1, Th, 5:30-9, BlegH 145, Everest

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**IDSc 5410 DECISION SUPPORT AND EXPERT SYSTEMS.** 4 credits, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60; Resident Graduate credit \$488; Non-resident Graduate credit \$1054.40; Resident Graduate School credit \$878; Non-resident Graduate School credit \$1912.40.

Overview of technical and organizational aspects of decision support systems. Management of DSS within the end-user computing environment. Conceptual foundations of DSS, DSS software reviews, and case examples. *Open to nondegree students with equivalent experience. Must be taken A-F.* (Prereq 3030 or MSci 3030 or MBA 8025 or equivalent or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 7 Extension students)

Winter Qtr, ★●Sec 1, W, 5:30-9, BlegH 330

**IDSc 5430 (formerly 3131) ADVANCED DATABASE DESIGN AND ADMINISTRATION.** 4 credits, \$8430, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60; Resident Graduate credit \$488; Non-resident Graduate credit \$1054.40; Resident Graduate School credit \$878; Non-resident Graduate School credit \$1912.40.

Perspective of data administrator serving the users of information and DBMS. Role, organization, functions, and tools of data administration. Data planning and information architectures. Advanced logical database design. Advanced database manipulation with high-level languages and natural languages. Object-oriented DBMS and support for graphics and CAD/CAM applications. Data security, maintaining database integrity, and managing data in a shared, networking, or distributed environment. Strategies for using advanced DBMS tools in systems development and operations. *Open to nondegree students with equivalent experience. Credits may not be applied to the Carlson School of Management MBA program. Must be taken A-F.* (Prereq 5103. Qualified students may register for graduate credit at the University of Minnesota. Limited to 37)

Spring Qtr, ★Sec 1, W, 5:30-9, HHCtr 20, Everest

### Special Topics and APEX (Academy Practitioner Exchange) Courses.

The field of information technology is changing constantly and rapidly. The IDSc department and faculty, as recognized leaders in the field, develop and offer new courses on a regular basis as special topics courses in recognition of this change and the need for timely courses. Some of these new courses may eventually be added to the formal curriculum while others may be more transitory and opportunistic in nature because a topic is new and warrants a course as the topical area evolves.

Special topics courses are offered in two forms, formats, and tuition levels: APEX and special topics. APEX courses are designed to provide a productive interaction between faculty and practitioners who are interested in developing the frontiers of knowledge and practice. These courses are assumed to be primarily for students at the graduate or post-baccalaureate level, and also to have a relatively smaller class size. APEX tuition includes a special fee to facilitate development and offering of such new courses, and as such the APEX tuition is at essentially graduate tuition level. The format of APEX courses tends to be that of a research course or project where the student has a significant responsibility for contribution and learning as opposed to a traditional course consisting of the instructor delivering knowledge to a student.

Special topics courses are topical and timely, and will typically be offered in traditional format. These courses are intended for senior undergraduates, graduates, and post-baccalaureate students. A smaller special fee is included in the tuition, which is at typical undergraduate tuition level but also available for graduate credit at that tuition level. Special topics courses are assumed to be more typical in terms of class size.

The practice is to offer at least one Special Topics or APEX course each quarter, including some that are not identified at the time of the printing of the Extension Classes academic year bulletin. It is suggested that interested students contact the Extension Coordinator, Les Wanninger, at (612) 624-1874, or by the Internet at [lwanning@epx.cis.umn.edu](mailto:lwanning@epx.cis.umn.edu), to learn about new special topics and APEX courses each quarter.

**For further information about the courses listed below, contact the course coordinator at (612) 624-8030.** Course sites to be announced.

**M.B.A. Students:** M.B.A. students must register with Les Wanninger. Call (612) 624-1874 for information. Do not register through Extension Classes.

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**IDSc 5998 SPECIAL TOPICS: APEX PROGRAM: Business Process Re-Engineering.** 4 credits, tuition\* (includes \$450 special fee): Resident \$824; Non-resident \$1534.60; Resident Graduate credit \$922; Non-resident Graduate credit \$1488.40; Resident Graduate School credit \$1312; Non-resident Graduate School credit \$2346.40.

Business process redesign (BPR) is an approach for fundamentally rethinking and radically redesigning business systems, including an overhaul of job designs, organizational structures, and management systems. The objectives of BPR are to make processes effective, flexible, and consistently high quality. A new, advanced, automated methodology will be presented and used as part of the course. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 30)

Winter Qtr, ★Sec 1, M, 5:30-9, HHCtr 20,  
Judisch, Dunnington, Wentland

**IDSc 5998 SPECIAL TOPICS: APEX PROGRAM: CASE Technology.** 4 credits, tuition\* (includes \$450 special fee): Resident \$824; Non-resident \$1534.60; Resident Graduate credit \$922; Non-resident Graduate credit \$1488.40; Resident Graduate School credit \$1312; Non-resident Graduate School credit \$2346.40.

CASE (Computer Assisted Software Engineering) is one of the fastest growing attempts to use computing technology in support of development of computing applications. It offers significant potential, but is not short of its own issues and limitations. This APEX program investigates CASE practice and relates that to what has been learned about applying other technology. A variety of teaching methods are used, including site visits, literature summary, lecture, case discussions, and group research. *Enrollment is by permission of the instructor, Gordon Everest, because of the developmental and research nature of the project, and the expectation that all project members will contribute as well. Call 624-1874 for a complete description and to discuss your participation.* (Prereq #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 30)

Winter Qtr, ★Sec 2, W, 6-9:30, Law 1, Everest

**IDSc 5998 SPECIAL TOPICS: APEX PROGRAM: Multimedia.** 4 credits, tuition\* (includes \$450 special fee): Resident \$824; Non-resident \$1534.60; Resident Graduate credit \$922; Non-resident Graduate credit \$1488.40; Resident Graduate School credit \$1312; Non-resident Graduate School credit \$2346.40.

Multimedia is the use of combinations of data, text, pictures, sound, animation, and graphics on a com-

puter system. In essence then, the application of multimedia technologies involves the integration, introduction, and infusion of new technologies into new applications in an environment of changing jobs, roles, and requirements. Individuals who may be classified as innovators and early adopters will likely lead the introduction of multimedia technologies. However, development of a supporting infrastructure of people and technology will be necessary for multimedia use to expand beyond a few innovators to widespread use. This research course will examine multimedia from the perspective of how it can be used strategically in pursuit of organizational objectives. Class participants will investigate a variety of multimedia applications, the capabilities that are used, benefits that are derived, and issues and limitations. Implementation issues will include defining a supporting infrastructure, managing change, legal issues, changes brought about by the technology, and project definition and management. Students will have access to the multimedia lab. *Enrollment is by permission of the instructor. Call 624-1874 for a complete description and to discuss your participation.* (Prereq #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 30)

Spring Qtr, ★Sec 3, Arr, Wanninger

**IDSc 5998 SPECIAL TOPICS: Information Technology for Competitive Advantage.** 4 credits, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60; Resident Graduate credit \$488; Non-resident Graduate credit \$1054.40; Resident Graduate School credit \$878; Non-resident Graduate School credit \$1912.40.

U.S. business spent over \$1 trillion on computers in the last decade. How to achieve competitive advantage through computers seems a major task for managers. This course provides an essential background for anyone using computers, including students in MIS, Marketing, Finance, Accounting, Management, Computer Science, and MBAs. Course addresses basic concepts on competitive advantage; basic technical capacities and possibilities in using information technology; re-engineering (changing business processes) as a skill to achieve competitive advantage; adding information services (augmented products) as another way to achieve competitive advantage. *Open to nondegree students with equivalent experience.* (Prereq 3030 or MBA 8225 or equivalent. Qualified students may register for graduate credit at the University of Minnesota. Limited to 30)

Fall Qtr, ★Sec 4, M, 5:30-9, Law 1, Song

Spring Qtr, ★Sec 5, M, 5:30-9, BlegH 335

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

### Institute of Languages and Literatures

(192 Klæber Court: 624-3331)

#### College of Liberal Arts

Textbooks for most courses offered through the Institute of Languages and Literatures on the East Bank campus are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000); at University of Minnesota Bookstore—West Bank (625-3000) for West Bank campus offerings; at University of Minnesota Bookstore—St. Paul (624-9200) for classes on that campus.

Teirab AshShareef, Assistant Professor of Afro-American and Middle Eastern Languages and Cultures

Iraj Bashiri, Associate Professor of Central Asian Languages and Cultures

Pradip Bhaumik, Lecturer

Bruce T. Downing, Associate Professor of Linguistics

Caesar Farah, Professor of Afro-American and African Studies and Middle Eastern Studies

Gary Jahn, Associate Professor of Slavic Languages and Literatures

Indira Junghare, Professor of South Asian Languages and Cultures

William Malandra, Associate Professor of Classical and Near Eastern Studies and South Asian Studies

Leonard A. Polakiewicz, Associate Professor of Slavic Languages and Literatures

Belkacen Saadallah, Lecturer

Nancy J. Stenson, Associate Professor of Linguistics

Alina Szala, Visiting Professor

Loren E. Tesdell, Lecturer

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in courses offered through the Institute of Languages and Literatures. For a copy of the current daytime *Class Schedule* and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

### East Asian Languages and Literatures

#### Chinese (Chn)

**Chn 1011-1012-1013 BEGINNING CHINESE.** 5 credits each quarter, tuition\* each quarter: Resident \$397.50; Non-resident \$1152.75.

Reading, writing, and speaking Chinese. Comple-

tion of 1013 prepares students for 3021. **Note:** Sections will be offered only if there is sufficient enrollment of 10 or more students each quarter. (No prereq for 1011; 1011 or 1006 or # for 1012; 1012 or 1007 or # for 1013. Limited to 15)

Fall Qtr, 1011, ★Sec 1, MW, 6:20-8:50, FolH 240

Fall Qtr, 1011, ★Sec 2, MW, 6:20-8:50, KoltH S134

Winter Qtr, 1012, ★Sec 1, MW, 6:20-8:50, FolH 142

Winter Qtr, 1012, ★Sec 2, MW, 6:20-8:50, KoltH S138

Spring Qtr, 1013, ★Sec 1, MW, 6:20-8:50, FolH 426

Spring Qtr, 1013, ★Sec 2, MW, 6:20-8:50, AkerH 211

**Chn 3021-3022-3023 INTERMEDIATE MODERN CHINESE.** 5 credits each quarter, tuition\* each quarter: Resident \$430; Non-resident \$1247.

Modern standard Chinese, expanded through conversation and reading. 3022 and 3023 will be offered only if there is sufficient enrollment in 3021.

Sections will be offered only if there is sufficient enrollment of 10 or more students each quarter.

(Prereq 1013 or 1008 or # for 3021; 3021 or # for 3022; 3022 or # for 3023. Limited to 15)

Fall Qtr, 3021, ★Sec 1, MW, 6:20-8:50, FolH 340

Winter Qtr, 3022, ★Sec 1, MW, 6:20-8:50, FolH 114

Spring Qtr, 3023, ★Sec 1, MW, 6:20-8:50, FolH 142

#### Japanese (Jpn)

**Jpn 1011-1012-1013 BEGINNING JAPANESE.** 5 credits each quarter, tuition\* each quarter: Resident \$397.50; Non-resident \$1152.75.

Reading, writing, and speaking Japanese. Completion of 1013 prepares students for 3021. *Students must attend the first class meeting or risk losing their place in the class. Sections will be offered only if there is sufficient enrollment of 10 or more students each quarter.* (No prereq for 1011; 1011 or 1006 or # for 1012; 1012 or 1007 or # for 1013. Limited to 20)

Fall Qtr, 1011, ★Sec 1, MW, 6:20-8:50, KoltH S137

Winter Qtr, 1012, ★Sec 1, MW, 6:20-8:50, KoltH S140

Spring Qtr, 1013, ★Sec 1, MW, 6:20-8:50, KoltH S140

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**Jpn 3021-3022-3023 INTERMEDIATE JAPANESE.** 5 credits each quarter, tuition\* each quarter: Resident \$430; Non-resident \$1247.

Foundation for reading knowledge of Japanese. Review and pattern drill. *Sections will be offered only if there is sufficient enrollment of 10 or more students each quarter.* (Prereq 1013 or 1008 or # for 3021; 3021 or # for 3022; 3022 or # for 3023. Limited to 20)

Fall Qtr, 3021, ★Sec 1, MW, 6:20-8:50, FolH 142

Winter Qtr, 3022, ★Sec 1, MW, 6:20-8:50, FolH 334

Spring Qtr, 3023, ★Sec 1, MW, 6:20-8:50, FolH 240

**Jpn 3031-3032-3033 THIRD-YEAR JAPANESE.** 5 credits each quarter, tuition\* each quarter: Resident \$430; Non-resident \$1247.

Hearing, speaking, and writing Japanese. Development of reading proficiency in modern Japanese prose and poetry. Formal written Japanese. *Sections will be offered only if there is sufficient enrollment of 10 or more students each quarter.* (Prereq 3023 or # for 3031; 3031 or # for 3032; 3032 or # for 3033. Limited to 20)

Fall Qtr, 3031, ★Sec 1, TTh, 6:20-8:50, FolH 208

Winter Qtr, 3032, ★Sec 1, TTh, 6:20-8:50, FolH 208

Spring Qtr, 3033, ★Sec 1, TTh, 6:20-8:50, FolH 240

### *Korean (Kor)*

**Kor 1011-1012-1013, BEGINNING KOREAN.** 5 credits each quarter, tuition\* each quarter: Resident \$397.50; Non-resident \$1152.75.

Reading, writing, and speaking Korean. Completion of 1013 prepares students for 3021. *Students must attend the first class meeting or risk losing their place in the class. Sections will be offered only if there is sufficient enrollment of 10 or more students each quarter.* (No prereq for 1011; 1011 or 1006 or # for 1012; 1012 or 1007 or # for 1013. Limited to 20)

Fall Qtr, 1011, ★Sec 1, TTh, 6:20-8:50, FolH 426

Winter Qtr, 1012, ★Sec 1, TTh, 6:20-8:50, FolH 142

Spring Qtr, 1013, ★Sec 1, TTh, 6:20-8:50, FolH 426

**Kor 3021-3022-3023 INTERMEDIATE KOREAN.** 5 credits each quarter. **Tentatively scheduled for 1996-97.**

### Language, Teaching, and Technology (LgTT)

**LgTT 5101 TECHNOLOGY IN THE LANGUAGE CLASSROOM.** 2 credits, tuition\*: Resident \$172; Non-resident \$498.80; Resident Graduate credit \$236; Non-resident Graduate credit \$519.20; Resident Graduate School credit \$431; Non-resident Graduate School credit \$948.20.

Uses of technology in language teaching. Theoretical background, application, and demonstration. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 20)

Winter Qtr, ★Sec 1, W, 4:15-6, FolH 234, Stenson

### Linguistics (Ling)

(See also English as a Second Language; Interdepartmental Study; Engl 3851, The English Language; and PSch 0720, Looking at Language: Fact and Fallacy)

**Ling 1005 LANGUAGE AND SOCIETY.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

The role of language in human social interaction; linguistic indicators of social status and attitudes; language and sex roles; linguistic ecology; language planning for multilingual communities; implications for educational and public policy. (No prereq)

Fall Qtr, Sec 1, T, 6:20-8:50, KoltH S136

Spring Qtr, Sec 2, T, 6:20-8:50, KoltH S136

**Ling 3001 INTRODUCTION TO LINGUISTICS.** 5 credits, \$3005, 5001, tuition\*: Resident \$430; Non-resident \$1247.

Systematic survey of phonetics, phonology, morphology, syntax, semantics, and historical-comparative linguistics; language learning and psychology of language; linguistic universals; language in society. (No prereq. Sec 1, 3, 4 meet concurrently with 5001)

Fall Qtr, Sec 1, T, 6:20-9:35, Arch 15

Fall Qtr, Sec 2, W, 6:20-9:35, Arch 50

Winter Qtr, Sec 3, T, 6:20-9:35, Arch 15

Spring Qtr, Sec 4, T, 6:20-9:35, Arch 35

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Ling 5001 INTRODUCTION TO LINGUISTICS.** 5 credits, \$3001, 3005, tuition\*: Resident \$430; Non-resident \$1247; Resident Graduate credit \$590; Non-resident Graduate credit \$1298; Resident Graduate School credit \$1077.50; Non-resident Graduate School credit \$2370.50.

See course description for Ling 3001. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3001, sec 1, 3, 4)

Fall Qtr, Sec 1, T, 6:20-9:35, Arch 15

Winter Qtr, Sec 2, T, 6:20-9:35, Arch 15

Spring Qtr, Sec 3, T, 6:20-9:35, Arch 35

**Ling 5401-5402 COMPUTATIONAL LINGUISTICS.** 4 credits each quarter, tuition\* each quarter: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Methods and issues in computer understanding of natural language. LISP and Prolog programming languages, with emphasis on their linguistic applications. Lab projects. *Sections will be offered only if there is sufficient enrollment of 10 or more students each quarter.* (Prereq 3001 or 5001 or #; some programming experience helpful. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr, 5401, Sec 1, W, 6:20-8:50, Arch 15

Spring Qtr, 5402, Sec 1, W, 6:20-8:50, Arch 15

### Slavic and Central Asian Languages and Literatures

#### *Croatian and Serbian Language (CrSr)*

No CrSr courses offered through Extension Classes 1995-96

#### *Polish (Plsh)*

**Plsh 3001-3002-3003 INTERMEDIATE POLISH.** 5 credits each quarter, \$1104-1105-1106, tuition\* each quarter: Resident \$430; Non-resident \$1247.

Offers students who have taken beginning Polish an expansion of experience in speaking, reading, writing, and understanding the language. Each part of the sequence includes review of grammar, reading contemporary texts, composition writing, and conversation practice. (Prereq 1103 or equivalent. Limited to 20)

Fall Qtr, 3001, ★Sec 1, W, 6:10-9:30, FolH 214, Polakiewicz

Winter Qtr, 3002, ★Sec 1, W, 6:10-9:30, FolH 214, Polakiewicz

Spring Qtr, 3003, ★Sec 1, W, 6:10-9:30, FolH 214, Polakiewicz

**Plsh 5900 HISTORY OF POLISH CULTURE.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

*This course will be offered pending the award of a USIA grant. Check on availability before registering by calling Extension Classes information at 625-3333.* Presents a general picture of the development of Polish culture: intellectual and literary trends, education, the arts, life of Polish society, and important historical Polish events. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr, Sec 1, T, 6:20-8:50, FolH 214, Szala

#### *Russian (Russ)*

**Russ 1101-1102-1103 BEGINNING RUSSIAN.** 5 credits each quarter, tuition\* each quarter: Resident \$397.50; Non-resident \$1152.75. (IS)

Grammar, pronunciation, reading, and practice in speaking. **Note:** *All students should register in Sec 1 fall quarter; assignment to other sections will be made as necessary, and section and building/room noted on the student's registration receipt.* (No prereq for 1101; 1101 or # for 1102; 1102 or # for 1103. Limited to 20)

Fall Qtr, 1101, ★Sec 1, M, 6:10-9:30, FolH 114, Polakiewicz

Fall Qtr, 1101, ★Sec 2, M, 6:10-9:30, FolH 426

Winter Qtr, 1102, ★Sec 1, M, 6:10-9:30, FolH 426, Polakiewicz

Spring Qtr 1103, ★Sec 1, M, 6:10-9:30, FolH 334, Polakiewicz

**Russ 1111-1112 RUSSIAN FOR READING KNOWLEDGE I & II.** 4 credits each quarter, tuition\* each quarter: Resident \$318; Non-resident \$922.20.

Prepares students to read Russian scholarly prose. *1111:* Presents the basic structures of Russian grammar and inculcates effective strategies of reading. *1112:* Completes the survey of grammar and offers a practicum in the application of the methods learned. (No prereq)

Winter Qtr, 1111, Sec 1, W, 6:20-8:50, FolH 419, Jahn

Spring Qtr, 1112, Sec 1, W, 6:20-8:50, FolH 312, Jahn

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



**Russ 3001-3002-3003 INTERMEDIATE RUSSIAN.** 5 credits each quarter, §1104-1105-1106, tuition\* each quarter: Resident \$430; Non-resident \$1247.

Offers students who have taken beginning Russian an expansion of experience in speaking, reading, writing, and understanding the language. Each part of the sequence includes review of grammar, reading contemporary texts, composition writing, and conversation practice. (Prereq 1103 or equivalent. Limited to 20)

Fall Qtr, 3001, ★Sec 1, T, 6:10-9:30, FolH 326, Jahn

Winter Qtr, 3002, ★Sec 1, T, 6:10-9:30, FolH 214, Jahn

Spring Qtr, 3003, ★Sec 1, T, 6:10-9:30, FolH 334, Jahn

### *Slavic (Slav)*

No Slav courses offered through Extension Classes 1995-96

## South Asian and Middle Eastern Languages and Cultures

### *Middle Eastern Languages and Cultures (MELC)*

**MELC 3036 THE RELIGION OF ISLAM.** 4 credits, §Arab 3036, §RelS 1036, tuition\*: Resident \$344; Non-resident \$997.60.

Evolution of Islam in historical context; institutions that made for diversity and continuity; traditions, laws, and observances of the faith; sectarian movements; philosophical and theological trends; modern developments; reformist, revolutionary, and militant. (No prereq. Meets concurrently with Arab 3036 and RelS 1036. Limited to a combined total of 40)

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

**MELC 3213 THE QUR'AN AS LITERATURE.** 4 credits, §Arab 3213, §RelS 3213, tuition\*: Resident \$344; Non-resident \$997.60.

Texts and commentaries in translation. Knowledge of Arabic not required. (No prereq. Meets concurrently with Arab 3213, RelS 3213. Limited to a combined total of 30)

Winter Qtr, ★Sec 1, M, 4:15-7, BlegH 205, AshShareef

Spring Qtr, ★Sec 2, M, 4:15-7, BlegH 205, AshShareef

**MELC 3505 SURVEY OF THE MIDDLE EAST.** 4 credits, §Arab 3505, Hist 3505, tuition\*: Resident \$344; Non-resident \$997.60.

Lands and peoples of the Middle East, historical evolution of Middle East civilizations and societies, the status of Middle East countries in world affairs. (No prereq. Meets concurrently with Arab 3505, Hist 3505. Limited to a combined total of 35)

Spring Qtr, ★Sec 1, Th, 6:20-8:50, BlegH 350, Tesdell

**MELC 3544 THE ARAB WORLD IN RECENT TIMES.** 4 credits, §Arab 3544, §Hist 3544, tuition\*: Resident \$344; Non-resident \$997.60.

Central Arab lands (the Arabian peninsula, Iraq, Syria, Jordan, Lebanon, Egypt) and North African region (Libya, Tunisia, Morocco, Algeria) from end of World War I to the present. Foreign occupation and struggle for independence, position in regional and international politics. (No prereq. Meets concurrently with Arab 3544, Hist 3544)

Fall Qtr, Sec 1, W, 6:20-8:50, BlegH 245, Saadallah

Winter Qtr, Sec 2, W, 6:20-8:50, BlegH 340, Saadallah

**MELC 3602 PERSIAN POETRY IN TRANSLATION.** 4 credits, §5602, tuition\*: Resident \$344; Non-resident \$997.60.

Major poetic works of Iran: quatrains of Omar Khayyam, sonnets of Hafiz; "new" Persian poetry such as works of Farough Farrokhzad. (No prereq. Meets concurrently with 5602)

Spring Qtr, Sec 1, W, 7-9:30, BlegH 245, Bashiri

**MELC 5602 PERSIAN POETRY IN TRANSLATION.** 4 credits, §3602, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

See course description for MELC 3602. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3602)

Spring Qtr, Sec 1, W, 7-9:30, BlegH 245, Bashiri

### *South Asian Languages and Cultures (SALC)*

**SALC 1504 INTRODUCTION TO THE RELIGIONS OF SOUTH ASIA.** 4 credits, §RelS 1031, tuition\*: Resident \$318; Non-resident \$922.20.

Introduction to Hinduism, Buddhism, and Jainism. (No prereq. Meets concurrently with RelS 1031)

Winter Qtr, Sec 1, T, 6:20-8:50, FolH 104, Malandra

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**SALC 3412 HINDUISM.** 4 credits, §SoAS 5412, §ReLS 3412, 5412, tuition\*: Resident \$344; Non-resident \$997.60.

Development of Hinduism, focusing on sectarian trends, modern religious practices, myths and rituals, pilgrimage patterns and religious festivals, and the interrelationship of Indian social structure and Hinduism. (Prereq 3411 or ReLS 1031 or #; Meets concurrently with 5412 and ReLS 3412, 5412. Limited to 25)

Fall Qtr, ★Sec 1, W, 6:20-8:50, FolH 50, Junghare

**SALC 3413 BUDDHISM.** 4 credits, §5413, §ReLS 3413, 5413, tuition\*: Resident \$344; Non-resident \$997.60.

Historical account of the Buddhist religion in terms of its rise, development, various schools, and common philosophical concepts. Focuses on Indian Buddhism, compares it with Hinduism, and discusses its demise and revival on the Indian subcontinent. (Prereq 3411 or ReLS 1031 or #. Meets concurrently with 5413 and ReLS 3413, 5413. Limited to 25)

Spring Qtr, ★Sec 1, W, 6:20-8:50, FolH 50, Junghare

**SALC 3414 COMPARATIVE RELIGIONS OF SOUTH ASIA.** 4 credits, §5414, §ReLS 3414, 5414, tuition\*: Resident \$344; Non-resident \$997.60.

Compares and contrasts basic philosophical concepts, literatures, ideologies, and ritualistic practices of Hinduism, Buddhism, and Jainism with those of Islam and Sikhism. (No prereq. SALC 3412 or ReLS 3413 recommended. Meets concurrently with 5414 and ReLS 3414, 5414. Limited to 20)

Winter Qtr, ★Sec 1, W, 6:20-8:50, FolH 50, Junghare

**SALC 3521 GANDHI AND NON-VIOLENT REVOLUTION.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Character of Gandhi, his influence over contemporaries, and his hold on the world today. (No prereq. Limited to 30)

Fall Qtr, ★Sec 1, M, 6:20-8:50, FolH 419, Bhaumik

**SALC 5412 HINDUISM.** 4 credits, §3412, §ReLS 3412, 5412, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

See description for SALC 3412. (Prereq 3411 or ReLS 1031 or #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3412 and ReLS 3412, 5412. Limited to 10)

Fall Qtr, ★Sec 1, W, 6:20-8:50, FolH 50, Junghare

**SALC 5413 BUDDHISM.** 4 credits, §3413, §ReLS 3413, 5413, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

See description for SALC 3413. (Prereq 3411 or ReLS 1031 or #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3413 and ReLS 3413, 5413. Limited to 10)

Spring Qtr, ★Sec 1, W, 6:20-8:50, FolH 50, Junghare

**SALC 5414 COMPARATIVE RELIGIONS OF SOUTH ASIA.** 4 credits, §3414, §ReLS 3414, 5414, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

See description for SALC 3414. (No prereq. SALC 3412 or 3413 recommended. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3414 and ReLS 3414, 5414. Limited to 10)

Winter Qtr, ★Sec 1, W, 6:20-8:50, FolH 50, Junghare

## Translation and Interpreting (TrIn)

(133 Klaeber Court: 624-4055)

**Curriculum in Translation and Interpreting—**Students who have developed a high degree of proficiency in both English and a language other than English can earn academic credit by completing a pre-professional program designed as preparation for employment in translation and interpreting. No major or minor is offered through this program, and the courses are presently available only through the Department of Extension Classes. Instructional staff and course consultants include certified interpreters, English language specialists, and bilingual tutors. *Courses will be offered, contingent on sufficient enrollment, for persons bilingual in the following language pairs for which well qualified interpreters are in demand locally: English-Cambodian, English-Hmong, English-Lao, English-Russian, English-Spanish, and English-Vietnamese.* Other languages may be added if there is sufficient demand.

For more information about these courses, call the Program in Translation and Interpreting at (612) 624-4055.

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**TrIn 3101 INTRODUCTION TO COMMUNITY INTERPRETING.** 3 credits, tuition\*: Resident \$258; Non-resident \$748.20.

A practical and theoretical introduction to interpreting in a variety of community settings. This course may serve bilingual individuals already functioning as nonprofessional interpreters while professionally employed in some other capacity, as well as persons already employed full or part time as interpreters without specific training, and others interested in future employment. The course introduces professional modes of interpreting and professional standards and provides supervised practice in consecutive interpreting. *Open to anyone with adequate skills in the language pairs listed above. Register by language.* To apply, contact the Program in Translation and Interpreting as soon as possible; call (612) 624-4055 to receive application materials, including information on how your language skills will be assessed. Applications for fall 1995 courses are due by September 1, and decisions about admittance of applicants will be made by September 15. TrIn 3101 is prerequisite for all courses numbered higher in the sequence. (Prereq written #; TrIn 3001 recommended. Limited to 25)  
 Fall Qtr, ★Sec 1, Cambodian, W, 6:10-9, FolH 312  
 Fall Qtr, ★Sec 2, Hmong, W, 6:10-9, FolH 318  
 Fall Qtr, ★Sec 3, Lao, W, 6:10-9, FolH 326  
 Fall Qtr, ★Sec 4, Russian, W, 6:10-9, FolH 116  
 Fall Qtr, ★Sec 5, Spanish, W, 6:10-9, FolH 104  
 Fall Qtr, ★Sec 6, Vietnamese, W, 6:10-9, FolH 344

**TrIn 3102 INTERMEDIATE COMMUNITY INTERPRETING I.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

A practical and theoretical course aimed at achieving professional proficiency in community interpreting. This course will cover consecutive interpreting and sight translation skills, vocabulary research and storage, intercultural issues, and analysis of the interpreting process. Students' performance will be assessed through audio- and video-taping. *Register by language.* TrIn 3101 is prerequisite for this and all courses numbered higher in the sequence. **Note:** TrIn 3102 and 3103 are a linked sequence. You must complete TrIn 3103 in order to receive credit for either course. TrIn 3103 will be offered in an intensive format during the first five-week summer session in 1996. Be sure that both courses fit your schedule before registering. (Prereq 3101. Limited to 25)  
 Spring Qtr, ★Sec 1, Cambodian, Sa, 8:30 a.m.-12:30, FolH 116  
 Spring Qtr, ★Sec 2, Hmong, Sa, 8:30 a.m.-12:30, FolH 134  
 Spring Qtr, ★Sec 3, Lao, Sa, 8:30 a.m.-12:30, FolH 138

Spring Qtr, ★Sec 4, Russian, Sa, 8:30 a.m.-12:30, FolH 104  
 Spring Qtr, ★Sec 5, Spanish, Sa, 8:30 a.m.-12:30, FolH 208  
 Spring Qtr, ★Sec 6, Vietnamese, Sa, 8:30 a.m.-12:30, FolH 214

*Planned future course offerings in the Program in Translation and Interpreting:*

- Intermediate Community Interpreting II (TrIn 3103—summer)
- American Law for Interpreters

**Institute of Technology (IofT)**

(106 Lind Hall: 624-5091)

The textbook for IofT 0001 is available at the first class meeting.

Allen J. Baldwin, Consulting Engineer

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in the Institute of Technology. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

*Information regarding the Engineer-in-Training Examination can be obtained by contacting the Minnesota State Board of Architecture, Engineering, Land Surveying, Landscape Architecture, and Interior Design, 133 E. Seventh St., St. Paul, MN 55101 (296-2388) or by contacting the Institute of Technology Student Affairs Office, 106 Lind Hall (624-5091). Courses that review for the Advanced Professional Engineering exams are offered as CE 0005, EE 0001, and ME 0001C.*

**IofT 0001 FUNDAMENTALS OF ENGINEERING REVIEW. (E.I.T. REFRESHER).** No credit, tuition\*: \$238.50.

Particularly designed as a refresher course to help graduates of engineering colleges prepare for the Engineer-in-Training Examination, the first of two written examinations required for registration as a Professional Engineer. Covers a review of mathematics, chemistry, materials, statics, dynamics, strength of materials, thermodynamics, electric circuits, fluid mechanics, and engineering economics. *Advance application for the E.I.T. test must be made to the State Board of Registration; telephone (612) 296-2388. Must be taken S-N.* (Prereq bachelor's degree in engineering)  
 Fall Spec Term, Sec 1, TTh, 6:10-8:40, Sept. 19-Oct. 19, (10 meetings), Phys 131, Baldwin.  
*No late fee through Sept. 6*  
 Winter Qtr, Sec 2, W, 6:10-8:40, MechE 212, Baldwin

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.  
 \* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

### Insurance and Risk Management (Ins)

(537 Management/Economics: 624-2500)

#### Carlson School of Management

Textbooks for most Ins courses are available at University of Minnesota Bookstore—West Bank (625-3000).

Andrew F. Whitman, Professor  
C. Arthur Williams, Professor Emeritus

Carlson School students must take Insurance courses A-F.

**Note:** All Ins courses have been approved by the Commissioner of Commerce for insurance and real estate continuing education credit.

**Note:** Students taking Carlson School of Management upper division undergraduate courses through CEE are expected to have completed the equivalent of 90 quarter college credits with a minimum of a "B-" grade average.

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Ins. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**Ins 5100 RISK MANAGEMENT AND INSURANCE.** 4 credits, \$3100, \$8100, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60; Resident Graduate credit \$488; Non-resident Graduate credit \$1054.40; Resident Graduate School credit \$878; Non-resident Graduate School credit \$1912.40.

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—mainly 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—such as availability of insurance, insurance pricing, employee benefits, workers' compensation, automobile, professional and product injury/compensation systems, and social insurance. **May be taken S-N only by non-business degree students.** (Prereq at least 90 credits completed or in progress. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr, Sec 1, T, 5:30-8:30, Law 1, Whitman  
Spring Qtr, Sec 2, T, 5:30-8:30, HHH Ctr 30,  
Whitman

### Interdepartmental Study (ID)

(225 Johnston Hall: 624-5701)

#### College of Liberal Arts

Textbooks for most ID courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

Subir K. Banerjee, Professor of Geology and Geophysics  
Maria Cheng, Associate Professor of Dance  
Terence Cooper, Associate Professor of Soil Sciences  
William Cunningham, Professor of Genetics and Cell Biology  
Daniel Detzner, Associate Professor of Family Social Science  
Thomas Halbach, Associate Professor, Soil Science  
Stephen Klein, Program Director, CLA Career Development  
Diane Lunde, Lecturer  
Toni A. McNaron, Professor of English Literature  
Naomi Scheman, Professor of Philosophy  
David Taylor, Dean of General College

**ID 3201 AIDS/HIV: CULTURAL PERSPECTIVES.** 5 credits. **Tentatively scheduled for 1996-97.**

**ID 3335 PHYSICS AS A LIBERAL ART.** 4 credits. **Tentatively scheduled for 1996-97.**

**ID 3336 CROSSING THE BORDERS OF LITERATURE AND SCIENCE.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Science and literature are popularly seen as comprising two different cultures, and it often appears that scientists and literary people don't talk to each other. Yet the structure of the factual world is constructed by the same language that constructs the worlds of fiction, and literature and science are forms of knowing that, in reality, do not exist in isolation from one another. New questions are emerging as some scientists and literary people recognize that their work may not be as different as they once thought: What is the impact of science and technology on literature? How do writers use science as a source of imagery? What aspects of the creative process are common to science and literature? What values do science and literature share? The purpose of this course is not simply to make specific comparisons across the borderline between literature and science, but to scrutinize the borderline itself, to raise questions about the complex relations between these two areas of knowledge and about attempts to bridge the gap. (No prereq. Limited to 25)

Fall Qtr, ★Sec 1, Th, 6:20-8:50, FolH 116, Lunde

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**ID 3925 LIFE/CAREER PLANNING.** 2 credits, tuition\* (includes \$15 special fee): Resident \$187; Non-resident \$513.80.

Provides an opportunity for individuals of all ages and backgrounds to reassess their interests, values, skills, and formulate post-graduation plans. Acquaints the student with concepts of career development offering a systematic approach to lifelong career planning and career management. Content includes issues of career selection, maximizing a university degree in the world of work, career-pathing, preparing an effective résumé, conducting a pro-active job search, interviewing practice, and coping with transition issues. Each student will develop an individualized career plan. *Non-journalism majors should register for Jour 3925. Journalism pre-majors and majors should register for this section. Must be taken S-N.* (Prereq CLA jr or sr; others by #. Meets concurrently with Jour 3925. Limited to a combined total of 20)

Fall Qtr, ★Sec 1, T, 6:20-8:15, MurH 308, Klein

(See also PSch 0665, Career Decisions: Strategies for Change; and CSW 0801, Mid-Life Career Audit: Deciding What to Do With the Rest of Your Life)

**ID 5525-5526 GARBAGE, GOVERNMENT, AND THE GLOBE.** 4 credits each quarter, tuition\* each quarter: Resident \$344; Non-resident \$997.60.

Different topics covered each quarter. Students may register for one or two quarters. Call (612) 624-1641 for information as to when specific topics will be offered, and for availability of graduate credit. A rigorous analysis of how garbage affects not only the economy, politics, environment, and health, but also the lives of untold future generations of humans and other species. The problem of garbage does not lend itself to narrow disciplinary approaches, but calls for cooperation among many fields. Reflecting the need for boundary crossing, this course offers an interdisciplinary approach to learning about messy, real-world problems. Faculty from the Institute of Technology, the Carlson School of Management, and the Colleges of Agriculture, Biological Sciences, and Liberal Arts join students in examining topics such as the movement of toxic materials through the environment; the management of solid wastes, especially those generated by incinerators, power plants, and municipal water treatment plants; the philosophical grounding of environmental exploitation in the ethics of humanism; the physical, chemical, and biological aspects of soils in environmental planning and conservation

decisions; and the effect of environmental problems on economic competitiveness and domestic and international corporate operations. The courses include lectures, exams, projects, films, visiting speakers, and field trips. (No prereq. Inquire about graduate credit at the time of registration. Limited to 50)

Winter Qtr, 5525, ★Sec 1, T, 6:20-8:50, BorH 375, StP Campus, Halbach

Spring Qtr, 5526, ★Sec 1, T, 6:20-8:50, BorH 375, StP Campus, Halbach

*For information about the new Solid Waste Management Certificate offered through Continuing Education and Extension/University College, see page 530.*

**ID 5615-5616-5617† WAYS OF KNOWING: SIX DISCIPLINES EXAMINED.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

What is the basis for discovery, knowledge formation, dissemination, and the pursuit of truth? Join a seminar with six faculty members drawn from such areas of the humanities as philosophy, from such sciences as geology, and from the social sciences such as history for a full academic year of discovery and dialogue. All six faculty meet together with the students each week for a full academic year to discover how these kinds of questions are examined in six very different disciplines. Become a geologist for five weeks, a philosopher for another five, and so on through the year. In Ways of Knowing, you will spend time learning how to think about different problems as if you were a scholar in each of the six disciplines, along with the other students, including the faculty. The purpose is to understand the similarities and differences among the various modes of inquiry represented in the course. **Students must enroll for all three quarters in order to receive any credit. Enrollment is by application only: Call 625-3898 or go to 306 Westbrook Hall.** (Prereq written # for 5615; 5615 for 5616; 5616 for 5617. Inquire about graduate credit when applying. Meets concurrently with LS 5615-5616-5617. Limited to a combined total of 25)

Fall Qtr, 5615, ★Sec 1, T, 6:20-8:50, FordH 70

Winter Qtr, 5616, ★Sec 1, T, 6:20-8:50, FordH 70

Spring Qtr, 5617, ★Sec 1, T, 6:20-8:50, FordH 40

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

### Interdisciplinary Archaeological Studies (InAr)

(215 Ford Hall: 625-2503)

#### College of Liberal Arts

Textbooks for most InAr courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Interdisciplinary Archaeological Studies. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

(See also Anthropology and Compleat Scholar non-credit courses)

*No InAr courses offered through Extension Classes 1995-96.*

### Interdisciplinary Offerings

See Economics 1102 and Political Science 1001

### International Relations (IntR)

(232 Social Sciences: 624-9353)

#### College of Liberal Arts

Textbooks for most IntR courses are available at University of Minnesota Bookstore—West Bank (625-3000).

(See also Political Science; Journalism and Mass Communication; The Compleat Scholar noncredit courses; and History)

Erika Alin, Visiting Assistant Professor

Kinley Brauer, Professor

Karlyn Eckman, Lecturer

Karin Fierke, Lecturer

Richard Rudolph, Professor

Belkacem Saadallah, Lecturer

Paula Tuchman, Lecturer

**IntR 3101 THEORETICAL APPROACHES TO INTERNATIONAL RELATIONS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Interdisciplinary study of international relations; contributions of various disciplines to the analysis of significant contemporary world problems. **Must be taken A-F.** (Prereq international relations major or #)

Winter Qtr, Sec 1, T, 6:20-8:50, BlegH 135, Fierke

**IntR 3900 TOPICS IN INTERNATIONAL RELATIONS: INTERNATIONAL RELATIONS AND WORLD SOCIETY: Dispute Resolution.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Despite all the headlines, international relations is more about cooperation than conflict. This course examines how states create a community among themselves based on common rules, understandings, and practices. Roles played by individuals, social movements, corporations, and other interest groups in constituting that society. (No prereq)

Fall Qtr, Sec 1, W, 6:20-8:50, BlegH 210, Tuchman

**IntR 3900 TOPICS IN INTERNATIONAL RELATIONS: DEVELOPMENT ASSISTANCE PROGRAMS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Prepares students interested in working in Third World development projects by providing an overview of relevant development history, theory, and approaches to foreign aid, development project organization, impacts of foreign aid, and the structure and function of various types of development assistance organizations. (No prereq)

Fall Qtr, Sec 2, Th, 6:20-8:50, BlegH 135, Eckman

**IntR 3900 TOPICS IN INTERNATIONAL RELATIONS: POLITICS OF RESISTANCE IN THE DEVELOPING WORLD.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Emphasizing theoretical works and case studies, an exploration of the political foundations and consequences of resistance movements in developing countries. Particular focus on varying mechanisms for collective mobilization and how culture and other sources of group identity mediate the expression of political resistance. (No prereq)

Winter Qtr, Sec 3, M, 6:20-8:50, BlegH 335, Alin

**IntR 3900 TOPICS IN INTERNATIONAL RELATIONS: POLITICAL ECONOMY IN THE NEW WORLD "ORDER."** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Examination of a range of theories about the new world "order," both conventional and critical; regional and international institutions relating to political economy and their role in this context. Questions about the changing relationship between politics and economy in the post-Cold War world are examined. (No prereq)

Spring Qtr, Sec 4, T, 6:20-8:50, BlegH 330, Fierke

\* Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**IntR 3900 TOPICS IN INTERNATIONAL RELATIONS: ISLAM AND SECULARISM: International Implications.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Ideological, political, economic, and cultural trends in contemporary Middle East and North Africa; focuses on such countries as Iran, Egypt, Turkey, and Algeria. (No prereq)

Spring Qtr, Sec 5, W, 6:20-8:50, HHHctr 30, Saadallah

**IntR 3981 MAJOR PROJECT SEMINAR.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Supports senior project requirement by allowing students to formulate their own research questions, select a topic, develop and produce a 25-30 page undergraduate research paper. **Must be taken A-F.** (Prereq non-honors IntR maj, sr, or #. Limited to 15)

Fall Qtr, ★Sec 1, T, 6:20-8:50, Law 3, Rudolph

Winter Qtr, ★Sec 2, Th, 6:20-8:50, Law 3

Spring Qtr, ★Sec 3, M, 6:20-8:50, Law 3, Brauer

## Islamic

(See Area Studies Programs, and the Institute of Languages and Literatures)

## Italian (Ital)

(260 Folwell Hall: 624-4308)

### College of Liberal Arts

Textbooks for most Ital courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

(See also PSch 0740, Italian for Travelers)

Lucy Carlone, Teaching Specialist

Susanna Ferlito, Assistant Professor

Ornella Lavecchia, Lecturer

Ronald Martinez, Associate Professor

Mara Teefy, Teaching Specialist

**Joint Day/Extension Classes**—You may register through Extension for most day school classes scheduled before 4 p.m. in Italian and French. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**Read about language laboratories on page 485.**

**Ital 1101-1102-1103 BEGINNING ITALIAN.** 5 credits each quarter, tuition\* each quarter: Resident \$397.50; Non-resident \$1152.75. (IS 1101)

Speaking, reading, and cultural objectives based on audiolingual approach. Students learn to understand and express fundamental ideas, to write anything they can say, and to master fundamental structures of the language. Includes audiovisual aids. (No prereq for 1101; 1101 or # for 1102; 1102 or # for 1103. Limited to 25)

Fall Qtr, 1101, ★Sec 1, MTh, 6:20-8:25, AkerH 211

Fall Qtr, 1101, ★Sec 2, MTh, 6:20-8:25, Arch 20

Winter Qtr, 1102, ★Sec 1, MTh, 6:20-8:25,

AkerH 313

Spring Qtr, 1103, ★Sec 1, MTh, 6:20-8:25,

KoltH S134

**Ital 1104 INTERMEDIATE ITALIAN.** 5 credits, tuition\*: Resident \$397.50; Non-resident \$1152.75.

Consolidation of basic structures and development of oral fluency through readings and discussions. (Prereq 1103 or equivalent. Limited to 25)

Fall Qtr, ★Sec 1, MTh, 6:20-8:25, FolH 344

**Ital 1105 INTERMEDIATE ITALIAN.** 5 credits, tuition\*: Resident \$397.50; Non-resident \$1152.75.

Literary and cultural readings, leading to introductory knowledge of Italian literature and civilization. (Prereq 1104 or equivalent. Limited to 25)

Winter Qtr, ★Sec 1, M, 6:20-8:25, FolH 426; Th, 6:20-8:25, FolH 344

**Ital 1106 INTERMEDIATE ITALIAN.** 5 credits, tuition\*: Resident \$397.50; Non-resident \$1152.75.

Further development of reading, writing, listening, and speaking skills through the study of contemporary Italian culture. (Prereq 1105 or equivalent. Limited to 25)

Spring Qtr, ★Sec 1, MTh, 6:20-8:25, FolH 148

**FrIt 3604 CINEMAS OF THE REAL.** See French and Italian

**FrIt 3608 NEW WAVE CINEMAS.** See French and Italian

## 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.

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Ital 0001 READING ITALIAN.** No credit, tuition\*: \$318.

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 a reading examination in Italian. Students successfully completing the course should obtain the Language Certification form from the Graduate School and present it to the Department of French and Italian for signature. **Must be taken S-N.** (No prereq. Limited to 25)

Spring Qtr, ★Sec 1, W, 6:20-8:50, KoltH S134, Carlone

### Japanese

(See Institute of Languages and Literatures)

### Jewish Studies

(See Classical and Near Eastern Studies)

### Journalism and Mass Communication (Jour)

(111 Murphy Hall: 625-9824)

#### College of Liberal Arts

Textbooks for most Jour courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

(See also English; and *Writing and Literature* in Compleat Scholar noncredit section)

Irving Fang, Professor

Stephen Klein, Program Director, CLA Career Development

**Joint Day/Extension Classes**—You may register through Extension for day school classes that do not require preregistration. You must have written permission from **both** the department and from the instructor in order to enroll in a Joint Day/Extension section. Joint Day/Extension classes are listed in the back of the daytime Class Schedule. For a copy of the current schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**Classes Open to Non-Majors**—The following classes are open to non-majors and do not require preregistration: *Jour 1001*, *Jour 3614*, *Jour 3745*, *Jour 3796*, *Jour 3925*, and *Jour 5251*.

Journalism majors must have these 3xxx courses approved on program plan. Pre-jour majors should not enroll in these 3xxx/5xxx courses.

**Classes Requiring Preregistration**—Classes that require preregistration are designed for majors, but non-majors may attend these courses if two conditions are met: (1) space is available, and (2) students have the instructor's permission.

Instructor permission is generally given if students have appropriate academic or professional background for the course. If you are a non-major and interested in one of these classes, call (612) 625-0120 for further information.

Classes that require preregistration are designated by a Δ symbol and a note stating that preregistration and course override are required. Preregistration for majors is generally held Monday through Friday during the week that day school registration begins. Dates are published each quarter in a newsletter distributed in all journalism classes. Copies are also available at the beginning of each quarter in the Undergraduate Studies Center (see below).

**For Journalism Majors**—A current transcript is required each time journalism majors preregister for these courses. Registration overrides are issued at the time of preregistration if the student has met all prerequisites, including admission to major status (see below), and the course is approved on the major program plan.

**For Non-Majors**—About three weeks after preregistration, a late preregistration date for majors will be scheduled. After that date, registration overrides will be issued to non-majors who have instructor permission for courses that have space available. Non-majors do not need to supply a copy of their current transcript.

**Admission to the Journalism Major**—Students must apply for admission to the major. In order to get specific information about application procedures and requirements, students planning to major in journalism must attend a pre-major information meeting. Students must be admitted to the College of Liberal Arts and attend a pre-major information meeting before enrolling in Journalism 3003.

**Undergraduate Studies Center**—Further information about preregistration or declaring pre-journalism major status is available from the Undergraduate Studies Center, 15 Murphy Hall; telephone (612) 625-0120. Office hours are weekdays 9 a.m. to noon, and 1 to 4 p.m.

**Continuing Education for Women (CEW) section available in the following course:** Jour 1001

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



**Jour 1001 INTRODUCTION TO MASS COMMUNICATION.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20. (IS)

The nature, functions, and responsibilities of communication media and agencies examined from the point of view of the professional journalist. News, opinion, entertainment, and persuasion functions; current trends. Specialized communications, aspects of advertising. *Open to non-majors. Must be taken A-F.* (No prereq)

Fall Qtr, Sec 1, W, 9 a.m.-12, MacP. *Offered through Continuing Education for Women*

Fall Qtr, Sec 2, Th, 6-9, MurH 105

Winter Qtr, Sec 3, Th, 6-9, MurH 105

Spring Qtr, Sec 4, T, 6-9, MurH 105

**Jour 3006 VISUAL COMMUNICATION.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Study of form, content, and meaning in visual communication. Introduction to basic visual elements and techniques. Issues in perception, picture use, and the sources of visual conventions. Attention to the organization and production of visual media. Applications to photography, film, television, advertising, and documentary work. *Non-majors may register after late preregistration if space is available and after obtaining instructor approval. Must be taken A-F.* (Prereq Jour major or minor status, 3004 or ¶3004, Δ. **Preregistration and course override required; see page 264.** Limited to 50)

Spring Qtr, ★Sec 1, M, 6-9, MurH 308

**Jour 3159 PUBLIC RELATIONS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

History and development of public relations practice and principles. Process and applications in a variety of institutional settings. Analysis and critique of public relations in contemporary society. *Non-majors may register after late preregistration if space is available and after obtaining instructor approval. Must be taken A-F.* (Prereq Jour major, 3004, 3101 or 3201, Δ. **Preregistration and course override required; see page 264.** Limited to 30)

Fall Qtr, ★Sec 1, W, 6:15-9, MurH 308

**Jour 3173 MAGAZINE WRITING.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60. (IS)

Writing feature articles for general, class, and trade publications; study of market free-lance methods. *Non-majors may register after late preregistration if space is available and after obtaining instructor approval. Must be taken A-F.* (Prereq Jour major, 3004, 3101, pass 40 wpm keyboarding test with 6 or

fewer errors, Δ. **Preregistration and course override required; see page 264.** Limited to 16)  
Winter Qtr, ★Sec 1, T, 6-9, MurH 212

(See also CSch 0430, Magazine Writing and Marketing)

**Jour 3241 ADVERTISING COPYWRITING.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Advertising appeals and strategy; advertising for print and broadcast. Individual and group projects. *Non-majors may register after late preregistration if space is available and after obtaining instructor approval. Must be taken A-F.* (Prereq Jour major, 3004, 3201, Δ. **Preregistration and course override required; see page 264.** Limited to 16)

Fall Qtr, ★Sec 1, MW, 4-6, MurH 311

**Jour 3301 BASIC PHOTOGRAPHIC COMMUNICATION.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Photography as creative communication. Fundamentals of photography; use of news cameras; dark-room processes. Film and processing expenses. *Non-majors may register after late preregistration if space is available and after obtaining instructor approval. Must be taken A-F.* (Prereq Jour major, 3004, Δ. **Preregistration and course override required; see page 264.** Limited to 12)

Winter Qtr, ★Sec 1, TTh, 6-9, MurH 20

(See also photography courses in Compleat Scholar noncredit section)

**Jour 3321 BASIC MEDIA GRAPHICS.** 4 credits, tuition\* (includes \$10 course fee): Resident \$354; Non-resident \$1007.60.

Basic introduction to mass media graphics, including design principles and history, production technology, typographic legibility, research and analysis of printing and production costs. *Non-majors may register after late preregistration if space is available and after obtaining instructor approval. Must be taken A-F.* (Prereq Jour major, 3004, Δ. **Preregistration and course override required; see page 264.** Limited to 16)

Fall Qtr, ★Sec 1, TTh, 4-7, MurH 315, 320

Winter Qtr, ★Sec 2, MW, 4-7, MurH 315, 320

(See also PSch 0701, Layout and Page Design for Desktop Publishing)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Jour 3614 HISTORY OF MASS COMMUNICATION TECHNOLOGY.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

How people have used the tools of communication from earliest times to the present. The impact of new technologies on society. The road to the information superhighway. *Open to non-majors. Pre-jour majors should not enroll in course. Must be taken A-F.* (No prereq; Jour majors must have course approved on program plan. Limited to 72) Spring Qtr, ★Sec 1, Th, 6-9, MurH 105, Fang

**Jour 3745 MASS MEDIA AND POPULAR CULTURE.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Examination of the mass media's role in the formation of popular culture and cultural discourse. Special attention given to media representations of culture, ethnicity, religion, social status, and gender. Analysis of media metaphors, caricatures, and stereotypes. Discussion of the social and industrial pressures influencing media representation. *Open to non-majors. Pre-jour majors should not enroll in course. Must be taken A-F.* (No prereq; Jour majors must have course approved on program plan. Limited to 180)

Fall Qtr, ★Sec 1, M, 6-9, MurH 105

**Jour 3776 MASS COMMUNICATION LAW.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Brief historical background, First Amendment rights, basic law of defamation, free press and fair trial, access to news, access to press, privacy, contempt, obscenity, regulation of broadcasting and advertising, antitrust controls, legal and ethical rules affecting journalistic practice. *Non-majors may register after late preregistration if space is available and after obtaining instructor approval. Must be taken A-F.* (Prereq Jour major or minor, 3004, Δ. Preregistration and course override required; see page 264. Limited to 32)

Spring Qtr, ★Sec 1, W, 6-9, MurH 311

**Jour 3796 MASS MEDIA AND POLITICS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Analysis of role of mass media in politics; emphasis on television and electoral campaigns; news coverage versus newsmaking. Free press in democracy. *Open to non-majors. Pre-jour majors should not enroll in course. Must be taken A-F.* (Prereq Jour 1001 or Pol 1001 or #; Jour majors must have course approved on program plan. Limited to 72)

Spring Qtr, ★Sec 1, T, 6-9, MurH 308

**Jour 3925 LIFE/CAREER PLANNING.** 2 credits, tuition\* (includes \$15 special fee): Resident \$187; Non-resident \$513.80.

Provides an opportunity for individuals of all ages and backgrounds to reassess their interests, values, skills, and formulate post-graduation plans. Acquaints the student with concepts of career development offering a systematic approach to lifelong career planning and career management. Content includes issues of career selection, maximizing a university degree in the world of work, career-pathing, preparing an effective résumé, conducting a pro-active job search, interviewing practice, and coping with transition issues. Each student will develop an individualized career plan. *Open to non-journalism majors. Journalism pre-majors and majors should register for ID 3925. Must be taken S-N.* (Prereq CLA jr or sr; others by #. Meets concurrently with ID 3925. Limited to a combined total of 20)

Fall Qtr, ★Sec 1, T, 6:20-8:15, MurH 308, Klein

(See also PSch 0665, Career Decisions: Strategies for Change; and CSW 0801, Mid-Life Career Audit: Deciding What to Do With the Rest of Your Life)

**Jour 5171 ARTS REVIEWING AND REPORTING.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Covering the arts and entertainment beat, both as a reviewer and a reporter. Assignments will follow the flow of the Twin Cities arts/entertainment season, including its controversies. Weekly writing assignments, readings, field trips, guest lectures from artists and arts journalists. *Non-majors may register after late preregistration if space is available and after obtaining instructor approval. Must be taken A-F.* (Prereq Jour major, 3004, 3101, pass 40 wpm keyboarding test with 6 or fewer errors, Δ for Jour students; or # and Δ for nonmajors. Preregistration and course override required; see page 264. Inquire about graduate credit at the time of registration. Limited to 16)

Spring Qtr, ★Sec 1, T, 6-9, MurH 212

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**Jour 5174 MAGAZINE EDITING AND PRODUCTION.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Writing, editing, illustration, design, layout, photo-composition of a single-issue magazine. *Non-majors may register after late preregistration if space is available and after obtaining instructor approval. Must be taken A-F.* (Prereq Jour major, 3004, 3173 or 3321 or 5302, #, Δ. **Preregistration and course override required; see page 264.** Inquire about graduate credit at the time of registration. Limited to 24)

Winter Qtr, ★Sec 1, TTh, 4:15-6, MurH 315, 320

**Jour 5251 PSYCHOLOGY OF ADVERTISING.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Psychological principles, research techniques, and applications in advertising and selling. Consumer attitudes and behavior. Psychological mechanism upon which effectiveness of advertisements and commercials depends. *Open to non-majors. Pre-jour majors should not enroll in course. Must be taken A-F.* (Prereq Psy 1001; Jour majors must have course approved on program plan. Inquire about graduate credit at the time of registration. Limited to 180)

Winter Qtr, ★Sec 1, M, 6-9, MurH 105

**Jour 5261 ADVERTISING: MEDIA ANALYSIS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Print and electronic media, their role in advertising; selection and scheduling; rate structures and policies; evaluation and use of media and market measurements and data. *Non-majors may register after late preregistration if space is available and after obtaining instructor approval. Must be taken A-F.* (Prereq Jour major, 3004, 3201 or #, Δ. **Preregistration and course override required; see page 264.** Inquire about graduate credit at the time of registration. Lectures meet concurrently. Limited to 16)

Winter Qtr, ★Sec 1, Lect T, 6:30-8:30, MurH 311; Lab Th, 5:15-7, MurH 212

Winter Qtr, ★Sec 2, Lect T, 6:30-8:30, MurH 311; Lab Th, 7:15-9, MurH 212

**Jour 5321 PUBLICATION GRAPHICS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

The role of the design process as it applies to the production of magazines, brochures, and newsletters. Use of the computer as design tool and preparing electronic documents for the printing process. *Non-majors may register after late preregistration if space is available and after obtaining instructor approval. Must be taken A-F.* (Prereq Jour major, 3004, 3321, Δ. **Preregistration and course override required; see page 264.** Inquire about graduate credit at the time of registration. Limited to 16)

Spring Qtr, ★Sec 1, TTh, 4-7, MurH 315, 320

**Jour 5990 SPECIAL TOPICS IN MASS COMMUNICATION: PUBLIC RELATIONS WRITING AND CAMPAIGN TACTICS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Planning and execution of communication campaign tactics: topics include developing campaign proposals and action plans; techniques and tactics used in public relations writing, special events, media relations, stakeholder relations, and issues management. *Non-majors may register after late preregistration if space is available and after obtaining instructor approval. Must be taken A-F.* (Prereq Jour major, 3004, 3159, #, Δ. **Preregistration and course override required; see page 264.** Inquire about graduate credit at the time of registration. Limited to 13)

Winter Qtr, ★Sec 1, W, 6-9, MurH 30

## Kinesiology (Kin)

(224 Cooke Hall: 625-5300)

**College of Education and Human Development**  
(School of Kinesiology and Leisure Studies)

Textbooks for most Kin courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

(See also Dance; Physical Education; and Recreation)

**School of Kinesiology and Leisure Studies, Continuing Education**—A wide variety of programs in kinesiology, physical education, and recreation are available to local school districts who wish to jointly

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

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: Michael Wade, Coordinator, Continuing Education for the School of Kinesiology and Leisure Studies, Cooke Hall, 1900 University Ave. S.E., University of Minnesota, Minneapolis, MN 55455; or call (612) 625-2360.

Bruce D. Anderson, Associate Professor  
Allen Burton, Associate Professor  
Bob Broxterman, Lead Instructor  
Kevin Cardinal, Lead Instructor  
Jean K. Freeman, Head Coach, Swimming and Diving, Women's Intercollegiate Athletics  
Peter Hancock, Associate Professor  
George Hanson, Instructor  
Clem Haskins, Head Basketball Coach  
Mary Jo Kane, Associate Professor  
Katherine King, Instructor  
March Krotee, Associate Professor  
Arthur Leon, Professor  
Sally Mays, Head Women's Athletic Trainer  
Reid Nelson, Graduate Student  
Robert Pickert, Assistant Professor and Assistant Basketball Coach  
Robert Serfass, Associate Professor  
Linda Stoen, Teaching Specialist  
Lela June Stoner, Professor  
Michael Wade, Professor and Director of the School of Kinesiology and Leisure Studies  
Diane Wiese-Bjornstal, Assistant Professor

**Sports Management**—The School of Kinesiology and Leisure Studies offers a certificate in Sports Management through Continuing Education and Extension/University College. For information, call 625-5300.

**Coaching Licensure**—All courses necessary for the Minnesota State Coaching Licensure are offered through Continuing Education and Extension/University College and the summer session over a two-year period. For information, call (612) 625-5300.

**PEL Courses**—**Note:** Courses which may be applied to physical education teaching, adapted physical education, and/or state coaching licensure are designated as such by **PEL** at the end of the course description, before the prerequisite information, and include the following: Kin 3110, 3112, 3114, 3115, 3171, 3176, 5100, 5101, 5102, 5120, 5122, 5135, 5136, 5152, 5530, 5620, and 5980.

**Kin 3110 HUMAN ANATOMY.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45.

Emphasizes bones, nerves, and muscles and their significance in physical education. **Must be taken A-F.** (No prereq)

Fall Qtr, Sec 1, T, 4:15-6:30, CookeH 214, Serfass

**Kin 3112 FIRST RESPONDER FOR ATHLETIC COACHES AND ATHLETIC TRAINERS.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45.

First Responder curriculum specifically tailored to meet the needs of the injured amateur or professional athlete. Lectures and skills focused on preparing the athletic coach and/or athletic trainer to recognize, initially stabilize, and appropriately transport the injured athlete. Successful completion will entitle the student to First Responder certification. Includes AHA CPR training. **Must be taken A-F.** *Attendance is mandatory at all sessions, in their entirety. There will be no make-up sessions.* **Note:** In order for this course to be offered, a minimum of 12 students must enroll. For questions regarding the status of the class, telephone (612) 625-3333. (Prereq #. Limited to 25)

Fall Spec Term, ★Sec 1, TTh, 6-10, Sept. 21-Oct. 24, Mayo C365, Cardinal

Winter Spec Term, ★Sec 2, TTh, 6-10, Jan. 2-Feb. 1, Mayo C365, Cardinal

Spring Spec Term, ★Sec 3, TTh, 6-10, Mar 26-Apr. 25, Mayo C365, Cardinal

**Kin 3114 PREVENTION AND CARE OF INJURIES.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45.

Policies for conditioning athletes in interscholastic and intercollegiate sports; safety controls. **Must be taken A-F. PEL.** (Prereq 3110 or CBN 1027. A joint Day/Extension class limited to 10 Extension students)

Winter Qtr, ★Sec 1, M, 6-8:30, BFAB 210, Broxterman

**Kin 3115 PHYSIOLOGICAL APPLICATION TO SPORTS.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45.

Muscular contraction for strength development programs; contributions of training programs to endurance, speed, and skill acquisition; influence of training on the cardiovascular system; fatigue and recovery; early season training, pregame meals, and ergogenic aids in athletes. **Must be taken A-F. PEL.** (Prereq coaching licensure student or #. A joint Day/Extension class limited to 20 Extension students)

Spring Qtr, ★Sec 1, M, 6:15-8:30, CookeH 215, Nelson

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**Kin 3171 BASKETBALL COACHING.** 2 credits, tuition\*: Resident \$187; Non-resident \$542.30. Techniques, styles of offense and defense, conditioning and handling of players. **Must be taken A-F.** (No prereq. A joint Day/Extension class limited to 5 Extension students)  
Fall Qtr, ★●Sec 1, W, 6:15-8, CookeH 206, Pickert, Haskins

**Kin 3176 SWIMMING AND DIVING COACHING.** 2 credits, tuition\*: Resident \$187; Non-resident \$542.30.

Instruction in and practice of the basic techniques used in competitive swimming and diving; rules and regulations governing staging of competition. **Must be taken A-F.** (No prereq. A joint Day/Extension class limited to 20 Extension students)  
Spring Qtr, ★●Sec 1, T, 4:15-6:15, UAqCtr, Freeman

**Kin 3330 TOPICS: DANCE FOR THE ATHLETE.** 2 credits, tuition\* (includes \$30 special fee): Resident \$217; Non-resident \$572.30.

Dance skills for athletes which develop flexibility, strength, speed, and balance. Barre and floor work will be included. (No prereq. Meets concurrently with Dnce 3330 sec 2. Limited to a combined total of 20)

Winter Qtr, ★Sec 1, MW, 7-9, NorrisH 67, Stoen

**Kin 5100 TEACHING PHYSICAL EDUCATION FOR THE HANDICAPPED.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Introduction to the role of physical education in the education of the handicapped individual emphasizing understanding, principles of organization, administration, curriculum, supervision, and evaluation. **Must be taken A-F. PEL.** (Prereq #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 20 Extension students)

Fall Qtr, ★●Sec 1, W, 6:15-8:15, (plus 1 hr arr), CookeH 214, Burton

**Kin 5101 PHYSICAL EDUCATION ACTIVITIES FOR THE HANDICAPPED.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Adaptation of methods, materials, and physical activities to meet the needs of the physically, mentally, or emotionally atypical student applied to

specific handicaps in selected activity areas. **Must be taken A-F. PEL.** (Prereq 5100 or EPsy 5601. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)  
Winter Qtr, ★●Sec 1, M, 6:15-8:45, CookeH 206, Burton

**Kin 5102 PRACTICUM: PHYSICAL EDUCATION FOR THE HANDICAPPED IN AN ADAPTED SETTING.** 1-6 cr (max 6 cr), tuition\* each credit: Resident \$93.50; Non-resident \$271.15; Resident Graduate credit \$118; Non-resident Graduate credit \$259.60; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Opportunity for teaching in schools or community settings, providing instruction for atypical individuals in the segregated or adapted environment; includes seminar for review of current theory and exchange of ideas and problems. **Must be taken S-N. PEL.** (Prereq 5100, 5101 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Winter Qtr, ★●Sec 1, T, 6:15-8:45, CookeH 214, Burton

Spring Qtr, ★●Sec 2, M, 6:15-8:45, CookeH 214, Burton

**Kin 5106 ADAPTED AQUATICS.** 2 credits, tuition\*: Resident \$187; Non-resident \$542.30; Resident Graduate credit \$236; Non-resident Graduate credit \$519.20; Resident Graduate School credit \$431; Non-resident Graduate School credit \$948.20.

Introduction to adapted aquatics including approaches to teaching aquatics, aquatic programming options, accommodations and adaptations for persons with disabilities, organization and administration, resources, assessments, and individualized education plans. (Prereq current American Red Cross Water Safety Instructor certification (or equivalent YMCA certification) to receive Adapted Aquatic Instructor certification. If no certification is desired, then no prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 30 Extension students)

Spring Qtr, ★●Sec 1, M, 6-7:10, URecCtr 45; 7:10-8:30, CookeH 10, King

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Kin 5111 SPORT FACILITIES.** 3 credits, §Rec 5111, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Planning of areas and facilities for physical education and athletes, with emphasis on current trends and problems in the field. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with Rec 5111. A joint Day/Extension class limited to a combined total of 15 Extension students)

Winter Qtr, ★●Sec 1, T, 4:15-6:30, CookeH 215, Anderson

**Kin 5120 ADVANCED BIOMECHANICS.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Principles of mechanics applied to human movement, analysis of motor skills, application to individual projects. **PEL. Must be taken A-F.** (Prereq biomechanics, 3111 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension students)

Fall Qtr, ★●Sec 1, TTh, 4:15-6, CookeH 400, Stoner

**Kin 5122 APPLIED PHYSIOLOGY.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Application of concepts in human physiology to exercise physiology, sports training, and physical activities with particular reference to respiratory and cardiovascular systems. **Must be taken A-F. PEL.** (Prereq 3386 or equivalent or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 20 Extension students)

Fall Qtr, ★●Sec 1, M, 6:30-8:30 (plus 1 hr arr), CookeH 214, Serfass

**Kin 5132 MOTOR DEVELOPMENT.** 3 credits, \$5131, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Development aspects of motor skill acquisition from birth to physical maturity. **Must be taken A-**

**F.** (Prereq 3132 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Winter Qtr, ★●Sec 1, W, 4:15-6:15 (plus 1 hr arr), CookeH 215, Wade

**Kin 5135 MOTOR LEARNING AND HUMAN PERFORMANCE.** 3 credits, \$5130, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Mechanisms of human motor skill learning, emphasis on theories of motor learning and control of movement, motor memory, and individual differences. **Must be taken A-F. PEL.** (Prereq 3113 or 3135 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Spring Qtr, ★●Sec 1, T, 4:15-6:15 (plus 1 hr arr), CookeH 400, Hancock

**Kin 5136 PSYCHOLOGY OF COACHING.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Psychological aspects of coaching at the elementary, secondary, and college levels. **Must be taken A-F. PEL.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Winter Qtr, ★●Sec 1, W, 4:15-6:15 (plus 1 hr arr), CookeH 400, Wiese-Bjornstal

Spring Qtr, ★●Sec 2, Th, 4:15-6:15 (plus 1 hr arr), CookeH 215, Krotee

**Kin 5152 CURRICULUM DEVELOPMENT.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Trends, issues, and problems at selected levels of interests: elementary, secondary, junior college; for experienced teachers. **Must be taken A-F. PEL.** (Prereq 5151 or equivalent. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension students)

Fall Qtr, ★●Sec 1, M, 4:30-6:30 (plus 1 hr arr), CookeH 202, Hanson

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**Kin 5163 DEVELOPMENT OF MOTOR ASSESSMENT.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

An in-depth view of concepts, problems, and issues in the assessment of the motor functioning of children who may be handicapped or nonhandicapped, including a critical survey of existing assessment tools and experience in developing a specific assessment tool. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Spring Qtr, ★○Sec 1, W, 6:15-8:45, CookeH 206, Burton

**Kin 5170 FOUNDATIONS OF KINESIOLOGY.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Establishing guidelines for individual and group professional action; examining pertinent social forces, educational philosophical philosophies, and general ethics. **Must be taken A-F.** (Prereq grad or MED student. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Fall Qtr, ★○Sec 1, W, 4:30-6:25, CookeH 202, Hancock

**Kin 5371 SOCIOLOGY OF SPORT.** 4 credits, §Soc 5371, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Sport within and among societies and nations; social organizations: socioeconomic development, contemporary structure, personnel, fans; relationship to other institutions: economy, education, family, government, religion; social differentiation: status, ethnicity, sex, age; careers; ethical and social problems: honesty and violence. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension students)

Spring Qtr, ★○Sec 1, T, 4:15-6:30, CookeH 215, Krotee

**Kin 5385 EXERCISE FOR SPECIAL POPULATIONS.** 3-6 credits, tuition\* each credit: Resident \$93.50; Non-resident \$271.15; Resident Graduate credit \$118; Non-resident Graduate credit \$259.60; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Problems associated with exercise for persons with various conditions or diseases such as arthritis, cancer, diabetes, mental disorders, obesity, old age, or paralysis. Recommended exercise prescriptions and potential benefits for special populations. **Must be taken A-F.** (Prereq undergrad-level physiol or biol. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Winter Qtr, ★○Sec 1, TTh, 4:15-5:45, CookeH 400, Leon

**Kin 5455 RECREATIONAL SPORTS.** 3 credits, §Rec 5455, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

In-depth analysis of processes and benefits of recreational sports programming and participation. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with Rec 5455. A joint Day/Extension class limited to 5 Extension students)

Spring Qtr, ★○Sec 1, M, 4:15-6:30, CookeH 206, Anderson

**Kin 5530 BIOLOGICAL AND PHYSICAL FOUNDATIONS OF EDUCATION.** 2 credits, tuition\*: Resident \$187; Non-resident \$542.30; Resident Graduate credit \$236; Non-resident Graduate credit \$519.20; Resident Graduate School credit \$431; Non-resident Graduate School credit \$948.20.

Overview of biological and physical development from birth through adulthood and relationship of biological and physical development to education. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 25 Extension students)

Spring Qtr, ★○Sec 1, TTh, 4:30-6:20 (plus 1 hr arr), EE/CSci 3210, Burton

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Kin 5620 PRACTICUM: PREVENTION AND CARE OF ATHLETIC INJURIES.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Overview of problems (recognition, principles, responsibilities) related to athletic injuries in secondary and college programs; demonstration and practice in training techniques and familiarity with the use of instruments for athletic rehabilitation. **Must be taken A-F. PEL.** (Prereq CBN 1027, Kin 3114. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Spring Qtr, ★●Sec 1, M, 6:30-9, BFAB 210, Broxterman

**Kin 5980 RESEARCH METHODOLOGY.** 3 credits, §Rec 5980, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Methods and design for research in health, kinesiology, and recreation. **Must be taken A-F. PEL.** (Prereq education or grad student. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with Rec 5980. A joint Day/Extension class limited to 10 Extension students)

Fall Qtr, ★●Sec 1, Th, 4:15-6:45, CookeH 214, 215, Kane

**Kin 5985 APPLICATION OF RESEARCH.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Professional research for practitioner; interrelationships of purpose, methods, findings, conclusions, and implications. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension students)

Spring Qtr, ★●Sec 1, W, 4:15-6:15, CookeH 400, Stoner

**Kin 8132 SEMINAR: MOTOR DEVELOPMENT.** 4 credits, tuition\*: Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

(No prereq. Open only to students admitted to the University of Minnesota Graduate School. A joint Day/Extension class limited to 10 Extension students)

Spring Qtr, ★●Sec 1, Th, 4:15-6:15 (plus 1 hr arr), CookeH 400, Wade

*For information on noncredit conferences and workshops in Kinesiology, please contact the Department of Professional Development and Conference Services, 214 Nolte Center for Continuing Education: telephone 625-6616.*

**Day School Classes**—In addition to the Extension Classes listed above, day school classes are sometimes offered to educators during late afternoon, early evening, and weekend hours. For registration information about day school College of Education and Human Development courses, see page 160 or call 625-6501.

## Labor Education

For information on the Union Leadership Academy and other noncredit courses and workshops in labor education, please contact Labor Education Service, 437 Mgmt/Econ, University of Minnesota, 271 19th Avenue S., Minneapolis, MN 55455 (624-5020).

## Landscape Architecture (LA)

(125 Architecture: 625-6860)

### College of Architecture and Landscape Architecture

Textbooks for most LA courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

(See also Architecture; *Gardening and Landscaping* in Practical Scholar noncredit section; and Horticultural Science)

Craig Churchward, Lecturer in Landscape Architecture

Paul Damon, Lecturer in Landscape Architecture  
Susan Galatowitsch, Assistant Professor of Horticultural Science and Landscape Architecture  
Robert J. Gunderson, Adjunct Assistant Professor of Landscape Architecture

Roger Martin, Professor of Landscape Architecture  
Robert B. McMaster, Associate Professor of Geography

Richard T. Murphy, Adjunct Assistant Professor of Landscape Architecture

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



Joan Nassauer, Professor of Landscape Architecture  
Lance Neckar, Associate Professor of Landscape Architecture

Katherine Solomonson, Assistant Professor of Architecture

Robert D. Sykes, Associate Professor of Landscape Architecture

Leon Satkowski, Professor of Architecture

**Pre-Landscape Architecture Studies**—The Department of Landscape Architecture offers the following courses to be taken by students preparing for admission to the Bachelor of Environmental Design degree program. These courses along with other general distribution requirements constitute the pre-Landscape Architecture curriculum, most of which are offered through Continuing Education and Extension/University College. Students admitted to the MLA professional degree program will receive advanced standing if they have completed LA 1301, 3311, 3413, 5621, or 3098. For more information on Landscape Architecture curricula, call Professor Roger Martin at 625-6052.

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Landscape Architecture. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**LA 1024 THEORY OF LANDSCAPE DESIGN.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

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, 6-9:30, Arch 25, Churchward

**LA 1301 INTRODUCTION TO LANDSCAPE ARCHITECTURAL DRAWING.** 4 credits, §Arch 1301, tuition\*(includes \$25 course fee): Resident \$343; Non-resident \$947.20.

A beginning drawing course that emphasizes visualization and drawing of form and space in the physical environment. Exploration of basic elements of form using design drawing systems and conventions. Development of skills in visual literacy and expression through drawing. Recommended for entry-level students and for profession-

als desiring additional graphic skills. **Must be taken A-F. Required for the major.** (Prereq Arch or BED or LA major or #)

Fall Qtr, Sec 1, MW, 6:30-9:30, Arch 55, Damon

**LA 1401 THE DESIGNED ENVIRONMENT.** 4 credits, §Arch 1401, tuition\* (includes \$25 course fee): Resident \$343; Non-resident \$947.20.

Principles and traditions within the design disciplines of architecture, landscape architecture, and urban design, along with references in the arts, sciences, and literature, will be explored in this review of the formal constructs of the designed environment. **Must be taken A-F.** (No prereq. Lectures meet concurrently. Meets concurrently with Arch 1401. A joint Day/Extension class; each section limited to a combined total of 50 Extension students)

Fall Qtr, ★○Sec 1, Lect T, 3-4:45, SmithH 100;  
Rec Th, 9-10:30 a.m.

Fall Qtr, ★○Sec 2, Lect T, 3-4:45, SmithH 100;  
Rec Th, 10:30 a.m.-12

Fall Qtr, ★○Sec 3, Lect T, 3-4:45, SmithH 100;  
Rec Th, 3-4:45

Winter Qtr, ★○Sec 4, Lect T, 3-4:45, SmithH 100;  
Rec Th, 9-10:30 a.m., Arr, Damon

Winter Qtr, ★○Sec 5, Lect T, 3-4:45, SmithH 100;  
Rec Th, 10:30 a.m.-12, Arr, Damon

Winter Qtr, ★○Sec 6, Lect T, 3-4:45, SmithH 100;  
Rec Th, 3-4:45, Arr, Damon

**LA 3098 LANDSCAPE ARCHITECTURE DESIGN.** 4 credits, tuition\*(includes \$25 course fee): Resident \$399; Non-resident \$1109.60.

A design course with emphasis on spatial design at all scales. Design projects which focus on exploration of place and space-making qualities of plants, land form and structures. Class size allows instruction to adjust to various student needs and ability levels. Recommended for entry level LA students and for professionals desiring additional design skills. (No prereq. Limited to 15)

Winter Qtr, ★Sec 1, MW, 6:30-9:30, Arch 10,  
Damon

**LA 3311 DRAWING FOR DESIGN.** 4 credits, §Arch 3311, tuition\*(includes \$25 course fee): Resident \$399; Non-resident \$1109.60.

Exploration of drawing processes as modes of perception, cognition, and reflection. Study of representational aspects of drawing systems and conventions. Development of the understanding of space, light, and order. **Must be taken A-F. Required for the BED.** (Prereq Arch or BED or LA major, Arch/LA 1301 or #)

Spring Qtr, Sec 1, MW, 6:30-9:30, Arch 35,  
Damon

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**LA 3411 HISTORY OF ARCHITECTURE TO 1750.** 4 credits, §Arch 3411, §ArH 3411, tuition\* (includes \$5 course fee): Resident \$379; Non-resident \$1089.60.

History of architecture and city planning from antiquity to 1750, as illustrated by major monuments from Western and non-Western cultures. **Must be taken A-F.** (No prereq. Meets concurrently with Arch 3411, ArH 3411. Limited to a combined total of 100)

Fall Qtr, ★Sec 1, Th, 5:30-8:40, Arch 25, Satkowski

**LA 3412 HISTORY OF ARCHITECTURE SINCE 1750.** 4 credits, §Arch 3412, §ArH 3412, tuition\* (includes \$5 course fee): Resident \$379; Non-resident \$1089.60.

A history of the major monuments, concepts, and theories of urbanism and architecture since 1750. **Must be taken A-F.** (No prereq. Meets concurrently with Arch 3412, ArH 3412. Limited to a combined total of 100)

Winter Qtr, ★Sec 1, Th, 5:30-8:40, Arch 25, Solomonson

**LA 3413 HISTORY OF LANDSCAPE ARCHITECTURE.** 4 credits, §Arch 3413, tuition\* (includes \$5 course fee): Resident \$379; Non-resident \$1089.60.

Lecture course introduction to history and theoretical issues of landscape architecture in typologically based survey format. Course covers landscape design from the ancient to the modern periods. **Must be taken A-F.** (No prereq. Lectures meet concurrently. A joint Day/Extension class limited to 25)

Spring Qtr, ★Sec 1, Lect TTh, 4:30-6:20, SmithH 100; Rec Th, 5:30-6:20, Arch 10, Neckar

Spring Qtr, ★Sec 2, Lect TTh, 4:30-6:20, SmithH 100; Rec Th, 5:30-6:20, Arch 30, Neckar

Spring Qtr, ★Sec 3, Lect TTh, 4:30-6:20, SmithH 100; Rec Th, 5:30-6:20, Arch 45, Neckar

Spring Qtr, ★Sec 4, Lect TTh, 4:30-6:20, SmithH 100; Rec Th, 5:30-6:20, Arch 60, Neckar

**Continuing Education Courses Offered for Practicing Landscape Architects**—The following are courses offered by the Department of Landscape Architecture as continuing education courses for practicing landscape architects and others interested in specific aspects of the profession of landscape architecture. In most instances, qualified students may register for graduate credit at the University of Minnesota.

**LA 5562 INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS.** 4 credits, §Geog 5562, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Basic concepts of geographic information systems structure. Theory and application for geographic research, location and resource analysis, and regional planning. Location principles, data structure, variable attributes. (Prereq jr or sr geography major or grad or landscape architecture major or #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with Geog 5562. A joint Day/Extension class limited to a combined total of 3 Extension students)

Winter Qtr, ★Sec 1, Lect T, 6:30-9, AndH 230; Rec T, 2:30-4:30, BlegH 455, McMaster

Winter Qtr, ★Sec 2, Lect T, 6:30-9, AndH 230; Rec W, 11:15 a.m.-1:10, BlegH 455, McMaster

Winter Qtr, ★Sec 3, Lect T, 6:30-9, AndH 230; Rec W, 6:30-8:30, BlegH 455, McMaster

Winter Qtr, ★Sec 4, Lect T, 6:30-9, AndH 230; Rec Th, 2:30-4:30, BlegH 455, McMaster

Winter Qtr, ★Sec 5, Lect T, 6:30-9, AndH 230; Rec Th, 6:30-8:30, BlegH 455, McMaster

(See also REX 0504, Historical Atlas of the St. Paul Central Business District)

**LA 5621 PROFESSIONAL PRACTICE.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60.

Office and project management is analyzed using the case study method. Subject areas include organizational behavior, marketing, sales, strategic planning, financial and cost accounting, insurance, legal issues, and contracts. **Must be taken A-F.** (No prereq. May not be taken for graduate credit. A joint Day/Extension class)

Winter Qtr, Sec 1, TTh, 6-8, Arch 50, Murphy

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**Noncredit Landscape Architecture Courses**—For complete information about these courses, telephone (612) 625-0174 *before* registering. All 0xxx-level LA courses must be taken S-N.

**LA 0010 IRRIGATION DESIGN FOR LANDSCAPE ARCHITECTS.** No credit, tuition\*: \$318. Intended for those who have a need to know the basics and more about irrigation—whether from a design, installation, or administrative review position—in order to enhance their professional development. Focuses on why irrigation is needed, when and when not to irrigate, the theory of irrigation, and practical solutions to problems. Topics include hydraulics, piping, head layout, irrigation systems, programming, water balance, and specialized applications. Participants receive hands-on familiarity with irrigation components throughout the course and are introduced to the latest technical and product innovations. By the end of the course, participants should be able to design a simple irrigation system, be conversant in technical specifications, and know how to evaluate the effectiveness of irrigation designs and built systems. **Must be taken S-N.** (No prereq)

Winter Qtr, Sec 1, Th, 5-8:30, Arch 10,  
Gunderson

## Languages

See Area Studies Programs; Classical and Near Eastern Studies; Dutch; French; German; Hebrew; the Institute of Languages and Literatures; Italian; Portuguese; Scandinavian Languages and Literature; and Spanish.

## Language Laboratories

(See page 485)

## Latin

(See Classical and Near Eastern Studies)

## Latin American Studies

(See Area Studies Programs; and the Institute of Languages and Literatures)

## Law, Business

(See Business Law)

## Learning and Academic Skills (LAsK)

(104 Eddy Hall: 624-7546)

### College of Liberal Arts

Textbooks for most courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

Susan A. Aase, Assistant Director, Disability Services

Donna Johnston, Career Services Coordinator, Disability Services

Jennifer Robey, Associate Staff, Learning and Academic Skills Center

Joyce D. Weinsheimer, Program Director of Learning and Academic Skills Center

(See also Rhetoric; General College; *Academic Skills and Career Development* in Practical Scholar noncredit section; and other study helps, page 492)

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in LAsK. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**Continuing Education for Women (CEW) section available in the following course:** LAsK 1501

*A student who does not attend the first class meeting of a LAsK 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.*

**LAsK 1001 BECOMING A MASTER STUDENT.** 2 credits, tuition\* (includes \$30 special fee): Resident \$189; Non-resident \$491.10.

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 also are provided through individualized learning projects. (No prereq. Limited to 30)

Fall Qtr, ★Sec 1, MW, 11:15 a.m.-12:05, EddyH 20

Fall Qtr, ★Sec 2, T, 6:20-8:50, EddyH 102

Fall Qtr, ★Sec 3, W, 6:20-8:50, EddyH 102

Winter Qtr, ★Sec 4, MW, 11:15 a.m.-12:05,  
EddyH 20

Winter Qtr, ★Sec 5, T, 6:20-8:50, EddyH 102

Winter Qtr, ★Sec 6, W, 6:20-8:50, EddyH 102

Spring Qtr, ★Sec 7, MW, 12:20-1:10, EddyH 20

Spring Qtr, ★Sec 8, T, 6:20-8:50, EddyH 102

Spring Qtr, ★Sec 9, W, 6:20-8:50, EddyH 102

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**LASK 1301 CAREER PLANNING FOR DISABLED INDIVIDUALS.** 2 credits. Tuition\*: Resident \$159; Non-resident \$461.10.

Assess interests, values, needs, and learning style as it relates to occupational choices. Learn decision-making strategies to identify possible career options. (No prereq. Limited to 20)

Fall Qtr, ★Sec 1, W, 4:30-6:30, KoltH S133,  
Aase

**LASK 1302 JOB-SEEKING SKILLS FOR DISABLED INDIVIDUALS.** 2 credits. Tuition\*: Resident \$159; Non-resident \$461.10.

Develop skills necessary to conduct a productive job search. Learn strategies to write a resume, complete the application process, and interview effectively. (Prereq 1301. Limited to 20)

Winter Qtr, ★Sec 1, W, 4:30-6:30, KoltH S136,  
Aase

**LASK 1303 INTERNSHIP EXPERIENCE FOR DISABLED INDIVIDUALS.** 2 credits. Tuition\*: Resident \$159; Non-resident \$461.10.

Gain work experience through a paid or volunteer internship. (Prereq 1302. Limited to 20)

Spring Qtr, ★Sec 1, W, 4:30-6:30, KoltH S136,  
Aase

**LASK 1501 RETURNING TO LEARNING.** 3 credits. Tuition\*: Resident \$238.50; Non-resident \$691.65.

Students turn life goals into educational plans by developing a concrete academic plan, assessing and managing life issues which directly affect academic progress, and upgrading study skills and learning strategies which support progress toward a degree.

**Must be taken A-F.** (No prereq. Limited to 30)

Fall Qtr, ★Sec 1, W, 6:20-8:50, EddyH 20

Winter Qtr, ★Sec 2, W, 6:20-8:50, EddyH 20

Winter Qtr, ★Sec 3, T, 9:30 a.m.-12, Fairview  
Comm Ctr, 1910 W Cty Rd B, Roseville.

*Offered through Continuing Education for Women*

Spring Qtr, ★Sec 4, W, 6:20-8:50, EddyH 20

## Legal Studies Education

(See General College)

## Liberal Studies (LS)

(306 Westbrook Hall: 626-8724)

### Continuing Education and Extension/ University College

Textbooks for most LS courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

The Graduate School and Continuing Education and Extension/University College offer the Master of Liberal Studies program for adult and part-time students. See the Degrees and Certificates section of this bulletin for general admission and curriculum requirements. Interested students may call the M.L.S. office in Extension Classes for more information: (612) 626-8724.

Kent Bales, Professor of English  
Terence W. Ball, Professor of Political Science  
Subir K. Banerjee, Professor of Geology and Geophysics  
Carol Bly, Lecturer  
Maria Cheng, Associate Professor of Dance  
Stephen L. Daniel, Coordinator, Minnesota Area Geriatric Education Center  
Daniel Detzner, Associate Professor of Family Social Science

Kevin Dooley, Associate Professor of Mechanical Engineering

Toni A. McNaron, Professor of English Literature  
Carol A. Miller, Associate Professor of American Studies

William E. Mishler, Professor of Scandinavian Languages and Literatures

David W. Noble, Professor of American Studies

Naomi Scheman, Professor of Philosophy

David Taylor, Dean, General College

Priority in assignment of space in classes is given to students admitted to the M.L.S. degree program. Students not admitted to the program may register on a space-available basis.

Students admitted to the M.L.S. degree program should pay the Graduate School tuition rate listed with the course. Students not admitted to a graduate program and desire to earn graduate credit should call 626-8724.

For students in master's degree programs at other institutions, or those offered by other University colleges (other than the Graduate School), check with your graduate studies adviser before registering; pay the graduate tuition rate.

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**LS 5100 TOPICS: CHAOS AND COMPLEXITY.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Chaos theory and related approaches which are often included under the name "complexity" are changing how we think of order itself. Because of this, they are influencing not only natural science but social science and the humanities as well. This course will examine these ideas and their effect in different disciplines. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 20)

Fall Qtr, ★Sec 1, W, 6-9, MechE 202, Dooley

(See also CSch 0570, The Science of Chaos: A New Window on Both the Ordinary and the Fantastic)

**LS 5100 TOPICS: WORLD WAR II AND THE CRISIS OF THE AMERICAN LANDSCAPE.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

When President Franklin Roosevelt led a revolution in the 1940s, converting citizens from their isolationist commitment to an internationalist one, the understandings of space and time which gave meaning to the world of male Anglo-American artists and intellectuals from the 1830s to the 1930s were shattered. This course focuses on the ways in which painters, architects, and musicians suddenly lost their belief that the arts should express an organic relationship to the national landscape. They now had to imagine "American" art as international. Also focuses on the ways in which literary critics, historians, and academic philosophers participated in this paradigmatic revolution which replaced the national landscape as a sacred space with an international landscape. An exploration of how and why the power and trauma of this revolution has been minimized, and asks whether the current debates about multiculturalism are unintended consequences of this revolution. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 22)

Fall Qtr, ★Sec 2, Th, 6:20-8:50, NichH 201, Noble

**LS 5100 TOPICS: INDIVIDUALITY AND COGNITION.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Scientists studying human cognition have usually disregarded differences among individuals on the assumption that thought processes are similar for everyone. This course examines an alternative to this "one brain for everyone" model. The instructor of this course and his research team have developed tools which can measure how people reveal the structure of their thought processes in the flow of their communications. Drawing on several disciplines, he has also created a model of cognitive structures which links physiology of information processing to human behavior, distinguishing the different ways in which individuals think, learn, make decisions, and communicate. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 22)

Winter Qtr, ★Sec 3, T, 6:20-8:50, NichH 209A

**LS 5100 TOPICS: PLACE, POWER, AND CULTURE IN AMERICAN LITERATURES.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Drawing on interdisciplinary readings from foundational texts such as *Imperial Eyes: Travel Writing and Transculturation* (1992) by Mary Louise Pratt, and *Mapping American Culture* (1992) by Franklin and Steiner, this course will examine how representations of place and American landscapes have been and continue to be sites of contested authority influencing national identities and relationships of power and cultural interaction. Particular attention will focus on manifestations of cultural authority deriving from narrative imagery of place in works by Thoreau, Hawthorne, Hemingway, and Faulkner in relation to contrasting conceptions in contemporary American Indian literature by Scott Momaday, Leslie Silko, Louise Erdrich, Michael Dorris, and others. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with AmSt 5920. Limited to a combined total of 25)

Winter Qtr, ★Sec 4, W, 6:20-8:50, NichH 209A, Miller

(See also CSch 0475, Revisiting the American Dream Through Writing and Literature)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**LS 5100 TOPICS: CASE STUDIES IN HEALTH CARE ETHICS.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Introduces students to a method of ethical decision making through group discussion of particular cases from clinical practice. Cases will exemplify important ethical issues: confidentiality, truth telling, patient autonomy, treating the incompetent, refusal of treatment, assisted suicide, allocation of limited health care resources, new reproductive technology, and research using human subjects. Clinicians will be on hand to participate in some of the discussions. The conclusions reached through interpretation of cases will be compared with professional codes of ethics as well as with major philosophical theories of ethics: duty based, utilitarian, virtue based, existentialist, and feminist. Readings will include classical cases in medical ethics (Quinlan, Tarasoff, Cruzan) as well as shorter works by Kant, Mill, Sartre, Gilligan, and others. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 22)

Spring Qtr, ★Sec 5, M, 6:20-8:50, NichH 122, Daniel

**LS 5100 TOPICS: SYSTEMS THINKING.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

An introduction to the skills of systems thinking, including a broad examination of current concepts and their application for understanding organizational behavior and management. Examples of concepts included are positive and negative feedback, systems modeling, archetypes, organizational change, team dynamics, microworlds, nonlinearity and self-organization. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 22)

Spring Qtr, ★Sec 6, W, 6:20-8:50, MechE 202, Dooley

**LS 5101 GOETHE: TRANSCENDENTAL APPROACH TO NATURE.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

From Goethe's day to this, the voices calling for a closer look at the premises underlying Newtonian

(i.e., "standard") science have grown in number and variety. This course will look at a particular "line" of voices in this chorus, a line that does not exactly begin with Goethe, since it is an ancient one with roots in alchemy, but one which he reformulated for his purposes. The purpose of this course is not to impugn Newton or Newtonian science; nor is it designed to argue for the correctness of Goethe's views. Rather, class participants will attempt to take a careful look at Goethe's critique of Newton in order to understand it in its historical context and in order to take a look at the issues it raises. Perhaps chief among these is the question of human consciousness. Students will be exposed to an important phase in the historical debate concerning the relationship of human beings to nature, a debate which continues to have considerable relevance in the present. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 22)

Fall Qtr, ★Sec 1, W, 6:20-8:50, FordH 70, Mishler

**LS 5610 ENVIRONMENTAL ETHICS, POLITICS, AND PUBLIC POLICY.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Duties within and beyond "borders," and the question: who or what belongs to the mortal community of creatures deserving protection and respect? The borders within and beyond which humans act are to be understood both literally (as legal/political boundaries) and metaphorically (as borders between generations of human beings or between human and non-human animal species). Asking who belongs to the community of those deserving protection and respect, class participants pay attention to their roles, relations, and actions as citizens and as members of the planet's most powerful and potentially dangerous species. To that end, the class will examine moral obligations, ask what "freedom" means, and examine what responsibilities are entailed by that freedom and what legitimate limits might be placed on the freedom to speak and act. Beyond such civic concerns, class members will look closely at unexamined assumptions about nature, the natural environment, other species, and future generations. Course readings will include classic and contemporary sources. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with Pol 5610, sec 1. Limited to a combined total of 30)

Winter Qtr, ★Sec 1, Th, 6:20-8:50, FordH 160, Ball

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**LS 5615-5616-5617† WAYS OF KNOWING: SIX DISCIPLINES EXAMINED.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

What is the basis for discovery, knowledge formation, dissemination, and the pursuit of truth? Join a seminar with six faculty members drawn from such areas of the humanities as philosophy, from such sciences as geology, and from the social sciences such as history for a full academic year of discovery and dialogue. All six faculty meet together with the students each week for a full academic year to discover how these kinds of questions are examined in six very different disciplines. Become a geologist for five weeks, a philosopher for another five, and so on through the year. In Ways of Knowing, you will spend time learning how to think about different problems as if you were a scholar in each of the six disciplines, along with the other students, including the faculty. The purpose is to understand the similarities and differences among the various modes of inquiry represented in the course. **Students must enroll for all three quarters in order to receive any credit. Enrollment is by application only: Call 625-3898 or go to 306 Wesbrook Hall. Must be taken A-F.** (Prereq written # for 5615; 5615 for 5616; 5616 for 5617. Meets concurrently with arranged sections of ID 5615-5616-5617. Limited to a combined total of 25)

Fall Qtr, 5615, ★Sec 1, T, 6:20-8:50, FordH 60  
 Winter Qtr, 5616, ★Sec 1, T, 6:20-8:50, FordH 60  
 Spring Qtr, 5617, ★Sec 1, T, 6:20-8:50, FordH 60

**LS 5910 LIVELY IMAGINATION: ETHICS AND ASPECTS OF MORAL THINKING.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

A consideration of first-rate poems, stories, essays. The effects of telling, hearing, and interpreting stories; empathy with respect to stories and stage development theory. Creative writing involved. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with Engl 5910, sec 5. Limited to a combined total of 30)

Spring Qtr, ★Sec 1, Th, 6:20-8:50, LindH 217,  
 Bly

**LS 8000 INTRODUCTION TO GRADUATE LIBERAL STUDIES.** 4 credits, tuition\*: Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

This seminar, which is required for and limited to students admitted to the M.L.S. degree program, will orient students to the character of interdisciplinary liberal studies at the graduate level. Each specific seminar will have a unique topic chosen by the graduate faculty teaching that seminar. (Prereq Δ. Open only to students admitted to the University of Minnesota Graduate School. Limited to 20)

Fall Qtr, ★Sec 1, M, 6:20-8:50, Law 3, Bales  
 Winter Qtr, ★Sec 2, M, 6:20-8:50, HHCtr 30

**LS 8001 FINAL PROJECT FOR GRADUATE LIBERAL STUDIES.** 4 credits, tuition\*: Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Students admitted to the Master of Liberal Studies program will synthesize and complete their final project. (Prereq written permission of advisor and approval from the Director of Graduate Studies. Open only to students admitted to the University of Minnesota Graduate School. Limited to 20)  
 Spring Qtr, ★Sec 1, T, 6:20-8:50, NichH 201

## Linguistics (Ling)

See Institute of Languages and Literatures

## Logistics Management (LM)

(1235 Management/Economics: 624-5055)  
**Carlson School of Management**

Textbooks for most LM courses are available at University of Minnesota Bookstore—West Bank (625-3000).

Frederick J. Beier, Professor  
 Donald V. Harper, Professor  
 Judy Ohannesian, Lecturer

**Logistics Management courses may not be taken S-N by Carlson School of Management students.**

**Note**—Students taking Carlson School of Management upper division undergraduate courses through CEE are expected to have completed the equivalent of 90 quarter college credits with a minimum of a "B-" grade average.

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**LM 3000 INTRODUCTION TO LOGISTICS MANAGEMENT.** 4 credits, §Tran 3064, §Tran 8264, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60.

Managing the flow of an organization's physical products (physical supply and distribution) and the linkages between the process of controlling the physical flow of products and the organization's major functions, i.e., finance, marketing, and operations management. Logistics topics and analysis of the impact of logistics decisions on other functional areas. Simulation exercise. **May not be taken S-N.** (Prereq Econ 1101 or equivalent and at least 90 credits completed or in progress. Open to nondegree students with equivalent experience. Limited to 40) Fall Qtr, ★Sec 1, T, 5:30-8:30, BlegH 235 Winter Qtr, ★Sec 2, T, 5:30-8:30, Law 3

**LM 5020 (formerly 3020/8020) ADVANCED LOGISTICS MANAGEMENT.** 4 credits, §3020, §8020, §Tran 3064, §Tran 8264, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60; Resident Graduate credit \$488; Non-resident Graduate credit \$1054.40; Resident Graduate School credit \$878; Non-resident Graduate School credit \$1912.40.

Management of the flow of physical products (physical supply and physical distribution) of an organization. Topics include transportation alternatives, customer service, inventory management, location decisions, warehousing, logistics information systems, international logistics, and logistics system design. Consists primarily of case problems. Usually includes logistics simulation exercise. **Must be taken A-F.** (Prereq 3000 or 5030 or equivalent and at least 90 credits completed or in progress. Open to nondegree students with equivalent experience. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students) Spring Qtr, ★●Sec 1, T, 5:30-9, BlegH 335

### MacPhail Center for the Arts

For information about offerings at MacPhail in downtown Minneapolis, students should telephone (612) 321-0100.

### MBA Program

See page 95.

### Management (Mgmt)

(835 Management/Economics: 624-5232)

#### Carlson School of Management

Textbooks for Mgmt courses are available at University of Minnesota Bookstore—West Bank (625-3000).

(See also Business, Government, and Society; Interdepartmental Study; and the Management Advancement Program)

Charles Flaherty, Lecturer/Coordinator of Management

John M. Hasselberg, Lecturer

Dileep Rao, Lecturer

Raoul Schander, Lecturer

William Seeley, Lecturer

**Business degree students must take Management courses A-F.**

**Note**—Students taking Carlson School of Management upper division undergraduate courses through CEE are expected to have completed the equivalent of 90 quarter college credits with a minimum of a "B-" grade average.

**Mgmt 3001 FUNDAMENTALS OF MANAGEMENT.** 4 credits, §8001, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60. (IS)

Leadership and management functions such as those required to establish goals, policies, procedures, and plans are studied. Motivation, planning, and control systems, and concepts of organizational structure and behavior are also reviewed. **May not be taken S-N.** (Prereq at least 90 credits completed or in progress. Limited to 125)

Fall Qtr, ★Sec 1, M, 5:45-8:45, AndH 330,

Flaherty

Fall Qtr, ★Sec 2, T, 5:45-8:45, AndH 330,

Flaherty

Winter Qtr, ★Sec 3, T, 5:45-8:45, AndH 270,

Flaherty

Spring Qtr, ★Sec 4, M, 5:45-8:45, AndH 270,

Flaherty

Spring Qtr, ★Sec 5, T, 5:45-8:45, AndH 270,

Flaherty

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



**Mgmt 3002 PSYCHOLOGY IN MANAGEMENT.** 4 credits, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60. (IS)

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. **May not be taken S-N.** (Prereq at least 90 credits completed or in progress. Limited to 36)

Fall Qtr, ★Sec 1, W, 5:45-8:45, BlegH 135

Winter Qtr, ★Sec 2, Th, 5:45-8:45, BlegH 215

Spring Qtr, ★Sec 3, T, 5:45-8:45, BlegH 140

**Mgmt 3004 BUSINESS POLICY: STRATEGY FORMULATION AND IMPLEMENTATION.** 5 credits, tuition\* (includes \$16 special fee): Resident \$483.50; Non-resident \$1371.75. (IS)

Undergraduate-level capstone course designed to develop skill in the general management functions of identifying and analyzing strategic issues and problems, establishing corporate or divisional goals, and designing realistic programs of action. Case analysis and discussion in class. Students also meet in small groups to prepare cases and occasional presentations to be made to the entire class. Concepts and approaches to strategic planning are taught in this course. These concepts as well as concepts, tools, and theories previously presented in other courses are applied to solve goal selection and strategy implementation problems. Usually the viewpoint of the general line manager (department, division, or executive level) is taken. **May not be taken S-N.** (Prereq senior and completion of business core or ¶final core course. Limited to 36)

Fall Qtr, ★Sec 1, Th, 5:30-9, BlegH 225

Winter Qtr, ★Sec 2, T, 5:30-9, BlegH 260

Spring Qtr, ★Sec 3, W, 5:30-9, BlegH 250

*Mgmt 3004 is also offered through Group Independent Study. For information, see page 499.*

**Mgmt 3006 SMALL BUSINESS MANAGEMENT.** 4 credits, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60.

Focuses attention on the role of small business, alternative entry strategies, and functional expertise required as the firm competes in its environment. **May not be taken S-N.** (Prereq at least 90 credits completed or in progress. Limited to 36)

Winter Qtr, ★Sec 1, M, 5:45-8:45, BlegH 340,

Flaherty

**Mgmt 3008 ENTREPRENEURSHIP AND THE SMALLER ENTERPRISE.** 4 credits, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60. (IS)

Assessment of opportunities and constraints in establishing and managing one's own firm; topics include structuring a new venture, buying into an existing enterprise, owning an enterprise versus becoming a principal employee in a new venture. Case method. (Prereq completion of business core courses or #. Limited to 30)

Fall Qtr, ★Sec 1, M, 5:45-8:45, BlegH 220, Rao

**Mgmt 3090 TOPICS IN LEADERSHIP: PERSPECTIVES ON MANAGEMENT.** 4 credits, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60.

Students are challenged to understand, develop, and adopt a personal leadership position and values profile. Participants examine organizations with effective and compassionate leadership in order to understand how they empower their associates. Discussion will go beyond simple participative management and will delve into world-class competitive organizations where people are valued for their individual leadership and unique creativity. **May be taken as an Auditor. Must be taken A-F.** (Prereq at least 90 credits completed or in progress. Limited to 36)

Spring Qtr, ★Sec 1, M, 5:45-8:45, BlegH 120, Schander

## Management Advancement Program

See Professional and Career Development.

## Management Information Systems

See Information and Decision Sciences

## Management Science

See Information and Decision Sciences; also see Operations and Management Science.

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

### Marketing (Mktg)

(1235 Management/Economics: 624-5055)

#### Carlson School of Management

Textbooks for most Mktg courses are available at University of Minnesota Bookstore—West Bank (625-3000).

Stowe Badenoch, University of Wisconsin-Stout

John Grubb, ADC Telecommunications  
James Johnson, St. Cloud State University  
Barbara Nemecek, CEE Coordinator  
John Nicolay, CrossroadsBusiness Services, Inc.  
Robert Ruckert, Associate Professor  
Kenneth Schneider, St. Cloud State University  
Nader Tavassoli, Assistant Professor

#### Business degree students must take Marketing courses A-F.

**Note**—Students pursuing the B.S.B. with a marketing emphasis should contact the Undergraduate Studies Office in 290 HHCtr to learn about upcoming course changes. Telephone (612) 624-3313

**Note**—Students taking Carlson School of Management upper division undergraduate courses through CEE are expected to have completed the equivalent of 90 quarter college credits with a minimum of a "B-" grade average.

**Mktg 3000 PRINCIPLES OF MARKETING.** 4 credits, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60. (IS)

Introduction to marketing terms, concepts, and skills useful in analyzing marketing problems. Covers legal, behavioral, ethical, competitive, economic, technological, and international factors affecting product, pricing, promotion, and marketing channel decisions. (Prereq Econ 1101 or equivalent and at least 90 credits completed or in progress. **May not be taken S-N.** Limited to 250)

Fall Qtr, ★Sec 1, T, 5:30-8:30, AndH 310

Fall Qtr, ★Sec 2, Th, 5:30-8:30, Richfield HS 143 (Limit 30)

Winter Qtr, ★Sec 3, W, 5:30-8:30, AndH 370

Spring Qtr, ★Sec 4, M, 5:30-8:30, Roseville Area HS 143 (Limit 35)

Spring Qtr, ★Sec 5, W, 5:30-8:30, AndH 210

**Mktg 3010 MARKETING RESEARCH.** 4 credits, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60.

Methods for collecting and analyzing data to solve marketing problems. Emphasis on survey research techniques. Topics include research design, secondary and primary data collection, sample design,

data analysis, and marketing management applications. (Prereq 3000, OMS 1020 or equivalent, and at least 90 credits completed or in progress. Limited to 45)

Fall Qtr, ★Sec 1, W, 5:30-8:30, BlegH 340

Winter Qtr, ★Sec 2, W, 5:30-8:30, HHCtr 25

Spring Qtr, ★Sec 3, M, 5:30-8:30, BlegH 425

**Mktg 3030 SALES MANAGEMENT.** 4 credits, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60.

Performing and managing the personal selling function as an integral part of an organization's overall marketing program, with emphasis on sales force organization, selection, training, motivation, compensation, forecasting, budgeting, and control. (Prereq 3000 and at least 90 credits completed or in progress. Limited to 45)

Winter Qtr, ★Sec 1, M, 5:30-8:30, BlegH 115

**Mktg 3040 BUYER BEHAVIOR.** 4 credits, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60.

Applications of the behavioral sciences to understanding customer behavior in the marketplace. Topics include perception, learning, persuasion, motivation, consumer and organizational decision-making models, and social and cultural influences. Managerial implications and applications. (Prereq 3000 and at least 90 credits completed or in progress. Limited to 45)

Spring Qtr, ★Sec 1, T, 5:30-8:30, HHCtr 25

**Mktg 3050 MARKETING COMMUNICATIONS.** 4 credits, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60.

Management of the communication aspect of marketing strategy. Emphasis on advertising and sales promotion. Topics include setting advertising objectives and budgets, media selection, creative strategy, and sales promotion techniques. (Prereq 3000 and at least 90 credits completed or in progress. Limited to 45)

Fall Qtr, ★Sec 1, M, 5:30-8:30, BlegH 150

**Mktg 3060 MARKETING CHANNELS AND DISTRIBUTION.** 4 credits, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60.

Design and management of channels of distribution in both consumer and industrial settings. Analysis of the interrelationships between marketing institutions in channels of distribution. (Prereq 3000 and at least 90 credits completed or in progress. Limited to 45)

Spring Qtr, ★Sec 1, Th, 5:30-8:30, BlegH 330

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**Mktg 3065 RETAIL MANAGEMENT.** 4 credits, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60.

Retail principles, problems, and trends as they relate to various types of retailing institutions. Topics include merchandise, inventory, and financial planning, pricing, retail location and layout, vendor relationships. (Prereq 3000 and at least 90 credits completed or in progress. Limited to 45)

Fall Qtr, ★Sec 1, Th, 5:30-8:30, BlegH 205

**Mktg 3080 MARKETING STRATEGY.** 4 credits, \$3020, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60.

Determination of product-markets where organization should compete and development of sustainable competitive advantages. Matching marketing strategy with the environment and firm's capabilities. (Prereq 3000 and at least 90 credits completed or in progress. Senior status recommended. Limited to 45)

Fall Qtr, ★Sec 1, T, 5:30-8:30, BlegH 250

Winter Qtr, ★Sec 2, Th, 5:30-8:30, BlegH 415

## Materials Science and Engineering (MatS)

(151 Amundson Hall: 625-1313)

### Institute of Technology

Textbooks for most MatS courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

Leonard Laskow, ASM

**MatS 0001C INTRODUCTION TO MATERIALS.** 3 certificate credits, tuition\*: \$238.50.

Structure of Metals; Solidification of Metal; Phase Diagrams; Solid Solutions; Heat Treatment Steel; Deformation of Metals; Alloy Selection; Stainless Steels; Metal Joining; Failure Analysis. (No prereq. High school chemistry and high school physics strongly recommended. Limited to 35)

Fall Qtr, ★Sec 1, M, 6:20-8:40, AmundH 116, Laskow

## Mathematics (Math)

(127 Vincent Hall: 625-8883)

### Institute of Technology

Textbooks for most Math courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

*Your attention is called to the Mathematics and*

*Science Certificate Program, and the Undergraduate Development Certificates in Engineering and Science—45 credits, in the Degrees and Certificates section of this Bulletin.*

(See also mathematics courses in General College; and mathematics courses in Practical Scholar non-credit section, page 454)

Stephen Agard, Professor

Glenn S. Ballard, Lecturer

John Corbett, Lecturer

William A. Dolid, Instructor, Minneapolis Community College, Lecturer

Zoltan Fischer, Instructor, Minneapolis Community College, Lecturer

David Frank, Associate Professor

Paul Garrett, Professor

James E. Guswiler, Lecturer

Shamlell Gupta, Lecturer

Lawrence R. Harper, Associate Professor

Harlan Hewitt, Instructor, North Hennepin Community College, Lecturer

Steve J. Hlusak, Instructor, North Hennepin Community College, Lecturer

Howard Jenkins, Associate Professor

Gary B. Kampf, Computer Engineer, Honeywell, Lecturer

Nickolas Konopliv, Lecturer

Richard A. Langlie, Instructor, North Hennepin Community College, Lecturer

Edwin Lundgren, Instructor, Lakewood Community College, Lecturer

Norman Meyers, Professor

Chester L. Miracle, Associate Professor

Richard B. Moeckel, Professor

Duane R. Nelson, Lecturer

Robert N. Sackett, Instructor, Normandale Community College, Lecturer

U. Kurt Scholz, Associate Professor of Mathematics, University of St. Thomas, Lecturer

Yasutaka Sibuya, Professor

Bernard P. Smith, Instructor, Normandale Community College, Lecturer

V. C. Varadachari, Instructor, Lakewood Community College, Lecture

**Major and minor in mathematics:** Most courses needed to complete the B.A. in mathematics are available through Extension Classes. A minor is also available. Interested students should call CEE Counseling, 625-2500, for details.

### 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. How-

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

ever, even if a student has had four years of high school mathematics, but it has been more than two years since the last mathematics course was completed, then the student should register in Math 1111 or Math 1201. Also the following rule usually applies: a student who has been out of high school five years or more, or who did not have second-year algebra in high school, should register either for Math 1051, General College 0625, Intermediate Algebra, Part I, or General College 0631, Intermediate Algebra, Part II. A student who knows very little about algebra should register for General College 0621, Elementary Algebra. See the General College course listings for descriptions.

**Placement Exam**—There is a regular placement exam to advise students which course they should register for. If you would like to take this placement exam before you register, it will be given at the beginning of registration this fall at 6 p.m. on Tues., Aug. 8, 1995, in Nolte Center 229. It is also given at 6 p.m. on Wed., Nov. 1, 1995, in Nolte Center 229, and at 6 p.m. on Wed., Jan. 31, 1996, in Nolte Center 125 (Library). There is no fee or pre-registration for this exam. The test lasts approximately 1 hour. Students may not use calculators. For further information about math placement, telephone Professor Miracle at (612) 625-2095.

The entrance requirement for the Institute of Technology is four years of high school mathematics, including solid geometry and trigonometry or Math 1111 and Math 1008.

All mathematics classes have prerequisite courses. For students who have not had the prerequisite courses, several mathematics courses have math placement scores as one of the ways to satisfy the prerequisites. Students will be given this exam on the first night of class. Students who do not pass this exam and have not passed the prerequisite courses will be asked to cancel the course and register for the prerequisite class.

### Mathematics for nonmajors and prebusiness students

Math 1131 and Math 1142 are designed in cooperation with the Carlson School of Management for benefit of prebusiness students. However, both courses are the second course of a two-course sequence. The first course in both sequences is Math 1111 or Math 1031. Business, accounting, and MBA students usually take Math 1111 followed by either Math 1131 or Math 1142.

### Calculus refresher course

Math 5090 is for students who have completed at least one year of calculus within the last 4 to 6 years. If a student finished calculus 7 or more years ago, then it is usually best to start the calculus sequence again by taking Math 1211. A student may not take this course unless he or she has had at least one year of calculus in college. Math 5090 provides students who have been out of school for several years with the necessary background to enter more advanced courses that require a fresh knowledge of calculus.

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Mathematics. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

The Practical Scholar program offers a series of review and skill-building courses that are especially valuable for people who encounter blocks in mathematics or who are afraid of mathematics. Refer to page 454.

**Note**—Students interested in noncredit introductory mathematics courses should see the Preparatory Mathematics Program in the General College section of this bulletin, page 217.

**Continuing Education for Women (CEW) sections available in the following courses:** Math 1031, 1131

**Math 1008 TRIGONOMETRY.** 4 credits, \$1201, tuition\*: Resident \$318; Non-resident \$922.20. (IS) Analytic trigonometry, identities, equations, properties of trig functions; right and oblique triangles. **See Mathematics prerequisites, page 283.** (Prereq plane geometry and 2 years of high school algebra and mathematics placement score or grade of C or better in Math 1051 and plane geometry. A student who has already had Math 1201 or 1151 may not receive credit for this course. Limited to 30)  
Fall Qtr, ★Sec 1, MW, 6:10-8, VinH 213  
Winter Qtr ★Sec 2, MW, 6:10-8, VinH 301  
Spring Qtr, ★Sec 3, TTh, 6:10-8, VinH 301

**Advising Note**—A 5-credit college algebra course will transfer to more colleges than will a 4-credit course.

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**Math 1031 COLLEGE ALGEBRA AND PROBABILITY.** 4 credits, §1051, §1151, §1111, §1201, tuition\*: Resident \$318; Non-resident \$922.20.

Algebra and analytic geometry explored in greater depth than is usually done in three years of high school mathematics. Additional topics from combinations, permutation, and probability. A suitable prerequisite for 1131 or 1142, but not for 1211 or 1251. **See Mathematics prerequisites, page 283.** (Prereq 3 years high school math and mathematics placement score or GC 0631. Limited to 30)

Fall Qtr, ★Sec 1, TTh, 1-2:50, MacP. *Offered through Continuing Education for Women*

Fall Qtr, ★Sec 2, TTh, 6:30-8:20, Richfield HS

Winter Qtr ★Sec 3, MW, 5:30-7:20, VinH 2

Spring Qtr, ★Sec 4, TTh, 6:10-8, VinH 1

**Math 1051 PRECALCULUS I.** 4 credits, §1031, §1111, §1201, §1151, tuition\*: Resident \$318; Non-resident \$922.20.

Algebra, analytic geometry, and trigonometry beyond the usual coverage found in a three-year high school mathematics program. First of two courses. Prepares students for a full calculus sequence. Not an acceptable prerequisite for 1131 or 1142. Is an acceptable prerequisite for 1111. (Prereq 3 years high school math and mathematics placement exam or GC 0631. Limited to 30)

Fall Qtr, ★Sec 1, MW, 6:10-8, VinH 1

Fall Qtr, ★Sec 2, TTh, 6:10-8, VinH 1

Winter Qtr ★Sec 3, MW, 6:10-8, VinH 1

Winter Qtr ★Sec 4, TTh, 6:10-8, VinH 1

Spring Qtr, ★Sec 5, MW, 6:10-8, VinH 1

**Math 1111 COLLEGE ALGEBRA AND ANALYTIC GEOMETRY.** 5 credits, §1201, tuition\*: Resident \$397.50; Non-resident \$1152.75. (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. *May be used to replace 1031.* **See Mathematics prerequisites, page 283.** (Prereq plane geometry, 2 years high school algebra and mathematics placement score or or 1051 or GC 0631. Limited to 35)

Fall Qtr, ★Sec 1, MW, 6:10-8:20, VinH 20

Fall Qtr, ★Sec 2, MW, 6:30-8:40, Roseville Area HS 143

Fall Qtr, ★Sec 3, TTh, 6:10-8:20, VinH 20

Winter Qtr, ★Sec 4, MW, 6:10-8:20, VinH 20

Winter Qtr, ★Sec 5, TTh, 6:10-8:20, VinH 20

Spring Qtr, ★Sec 6, MW, 6:10-8:20, VinH 20

Spring Qtr, ★Sec 7, TTh, 6:10-8:20, VinH 20

**Non-business students interested in the Master of Business Administration degree should take Math 1131.**

**Math 1131 FINITE MATHEMATICS.** 5 credits, tuition\*: Resident \$397.50; Non-resident \$1152.75. (For students in prebusiness and social and behavioral sciences.) Elementary computer programming, financial math, probability, linear algebra, linear programming, Markov chains. **See Mathematics prerequisites, page 283.** (Prereq 1111 or Mathematics placement score. Limited to 35)

Fall Qtr, ★Sec 1, TTh, 6:10-8:20, VinH 6

Winter Qtr, ★Sec 2, MW, 6:10-8:20, VinH 6

Spring Qtr, ★Sec 3, MW, 6:10-8:20, VinH 6

Spring Qtr, ★Sec 4, TTh, 1-3:10, MacP. *Offered through Continuing Education for Women*

**Math 1142 SHORT CALCULUS.** 5 credits, §1211, tuition\*: Resident \$397.50; Non-resident \$1152.75. (IS)

(A second course of a two-quarter sequence for students in prebusiness administration curriculum and for other students requiring a minimal amount of calculus. Students pursuing an Institute of Technology degree or who plan to take several quarters of calculus should not register for this course) Derivatives, integrals, differential equations, maxima and minima, partial differentiation, applications. **See Mathematics prerequisites, page 283.** (Prereq 1111 or mathematics placement score. Limited to 35)

Fall Qtr, ★Sec 1, MW, 6:10-8:20, VinH 209

Fall Qtr, ★Sec 2, TTh, 6:10-8:20, VinH 209

Winter Qtr, ★Sec 3, MW, 6:30-8:40, Roseville Area HS 146

Winter Qtr, ★Sec 4, TTh, 6:10-8:20, VinH 209

Spring Qtr, ★Sec 5, MW, 6:10-8:20, VinH 209

Spring Qtr, ★Sec 6, TTh, 6:10-8:20, VinH 209

**Advising Note**—A 5-credit precalculus course will transfer to more colleges than will a 4-credit course.

**Math 1151 PRECALCULUS II.** 4 credits, §1008, §1111, §1201, tuition\*: Resident \$318; Non-resident \$922.20.

Second of two courses in algebra, analytic geometry, and trigonometry. Prepares students for a full-year calculus sequence. Not an acceptable prerequisite for 1131 or 1142. **See Mathematics prerequisites, page 283.** (Prereq 3 1/2 years of high school math and placement exam or 1051. Limited to 30)

Fall Qtr, ★Sec 1, MW, 6:10-8, VinH 6

Winter Qtr, ★Sec 2, TTh, 5:30-7:20, VinH 211

Spring Qtr, ★Sec 3, TTh, 6:10-8, VinH 364

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Math 1201 PRE-CALCULUS.** 5 credits, §1008, 1111, tuition\*: Resident \$397.50; Non-resident \$1152.75. (IS)

Inequalities, analytical geometry, complex numbers, binomial theorem, functions and graphs, and trigonometric, exponential and logarithmic functions. *May be used to replace 1151.* See **Mathematics prerequisites, page 283.** (Prereq 1051 or 1111 or 4 years of high school math including trigonometry and mathematics placement score. For students in both IT and CLA who need a quick review of high school higher algebra and trigonometry before taking the calculus sequence. Limited to 35)

Fall Qtr, ★Sec 1, MW, 6:10-8:20, VinH 364

Fall Qtr, ★Sec 2, TTh, 6:10-8:20, VinH 364

Winter Qtr, ★Sec 3, MW, 6:10-8:20, VinH 364

Winter Qtr, ★Sec 4, TTh, 6:10-8:20, VinH 113

Spring Qtr, ★Sec 5, MW, 6:10-8:20, VinH 364

**Advising Note**—Students who have taken one calculus course at a school other than the University of Minnesota fit best in the sequence 1211-1221. Students who are starting calculus and intend to take at least two quarters through Extension Classes may take Math 1251-1252 or 1211-1221, but the sequence 1211-1221 gives students more flexibility in scheduling and more time is also spent in class. Students who have had 15 or more quarter credits (9 or more semester credits) at another school will find it to their advantage to take a course from the sequence 1241-3311-3321-3331. The sequence 1241-3311 (10 credits) covers the same material as 1261-3251-3252 (12 credits). Students who are working on a degree or certificate program at the University of Minnesota and who plan to take all their mathematics classes through Extension will find scheduling and related matters easier if they enroll in the sequence 1241-3311-3321. For further information, contact a CEE adviser at 625-2500.

**Math 1211 CALCULUS I.** 5 credits, §1142, 1311, 1611, tuition\*: Resident \$397.50; Non-resident \$1152.75. (IS)

Analytic geometry and calculus of functions of one variable, applications. *May be used to replace 1251.*

See **Mathematics prerequisites, page 283.** (Prereq 1201 with grade of C or better, or 1111 and 1008 with grade of C or better, or 4 years of high school math and math placement score. Limited to 35)

Fall Qtr, ★Sec 1, MW, 6:10-8:20, VinH 206

Fall Qtr, ★Sec 2, TTh, 6:10-8:20, VinH 206

Winter Qtr, ★Sec 3, TTh, 6:10-8:20, VinH 206

Spring Qtr, ★Sec 4, MW, 6:10-8:20, VinH 206

**Math 1221 CALCULUS II.** 5 credits, §1321, 1421, tuition\*: Resident \$397.50; Non-resident \$1152.75.

A continuation of the course described under 1211. *May be used to replace 1252.* (Prereq grade of C or better in 1211. Limited to 35)

Fall Qtr, ★Sec 1, MW, 6:10-8:20, AkerH 215

Winter Qtr, ★Sec 2, TTh, 6:10-8:20, AkerH 215

Spring Qtr, ★Sec 3, MW, 6:10-8:20, AkerH 215

**Math 1241 LINEAR AND NONLINEAR MULTIVARIABLE ANALYSIS I.** 5 credits, tuition\*: Resident \$397.50; Non-resident \$1152.75.

Linear algebra, geometry, and linear transformations in two, three, and more generally n-dimensional space; curves; limits and continuity in the multi-variable setting. *May be used to replace 1261.* (Prereq grade of C or better in 1221 or 1252. Limited to 35)

Winter Qtr, ★Sec 1, MW, 6:10-8:20, VinH 209

Spring Qtr, ★Sec 2, TTh, 6:10-8:20, VinH 113

**Math 1251 ONE VARIABLE DIFFERENTIAL AND INTEGRAL CALCULUS I.** 4 credits, §1211, §1551H, §1411H, tuition\*: Resident \$318; Non-resident \$922.20. (IS)

Calculus of functions of one variable and related geometry and applications. (Prereq 4 years of high school math and math placement score, 1151 with grade of C or better, or 1201 with grade of C or better, or 1111 and 1008 with grade of C or better. Limited to 30)

Fall Qtr, ★Sec 1, MW, 5:30-7:20, MechE 108

Fall Qtr, ★Sec 2, TTh, 6:30-8:20, Richfield HS

Winter Qtr, ★Sec 3, MW, 6:30-8:20, Roseville Area HS

Winter Qtr, ★Sec 4, TTh, 6:10-8, VinH 2

Spring Qtr, ★Sec 5, MW, 6:10-8, VinH 2

Spring Qtr, ★Sec 6, TTh, 6:10-8, VinH 2

**Math 1252 ONE VARIABLE DIFFERENTIAL AND INTEGRAL CALCULUS II.** 4 credits, §1221, §1552H, §1421H, tuition\*: Resident \$318; Non-resident \$922.20. (IS)

A continuation of the course described under 1251. (Prereq grade of C or better in 1251. Limited to 30)

Fall Qtr, ★Sec 1, MW, 6:10-8, VinH 113

Fall Qtr, ★Sec 2, TTh, 6:10-8, KoltH S138

Winter Qtr, ★Sec 3, MW, 5:30-7:20, MechE 108

Winter Qtr, ★Sec 4, TTh, 6:10-8, AkerH 211

Spring Qtr, ★Sec 5, MW, 6:30-8:20, Roseville Area HS

Spring Qtr, ★Sec 6, TTh, 6:10-8, AkerH 209

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**Math 1261 CALCULUS III.** 4 credits, §1241, tuition\*: Resident \$318; Non-resident \$922.20. (IS)

Further topics in calculus: parametric curves, polar coordinates, power series, and the Taylor polynomial with remainder. Linear algebraic equations; Gaussian elimination; determinants. Applications. (Prereq 1221, 1252, or equivalent. Limited to 30)

Fall Qtr, ★Sec 1, MW, 6:10-8, VinH 301

Fall Qtr, ★Sec 2, TTh, 6:10-8, VinH 301

Winter Qtr, ★Sec 3, TTh, 6:10-8, VinH 314

Spring Qtr, ★Sec 4, MW, 6:10-8, VinH 301

Spring Qtr, ★Sec 5, TTh, 6:10-8, MechE 102

**Math 3221 INTRODUCTION TO LINEAR ALGEBRA AND DIFFERENTIAL EQUATIONS.** 5 credits, §3261, §3321, tuition\*: Resident \$467.50; Non-resident \$1355.75. (IS)

Combines the linear algebra from Math 1261 with the major topics of Math 3261. Designed for transfer students with one year of calculus. Students who have taken Math 1261 at this university may take 3261. This course may be used to replace 3261. (Prereq one year of calculus. Limited to 30)

Winter Qtr, ★Sec 1, MW, 6:10-8:20, VinH 311

**Math 3251 MULTIVARIABLE DIFFERENTIAL CALCULUS.** 4 credits, §3311, §1241, §3521H, §3552H, tuition\*: Resident \$374; Non-resident \$1084.60. (IS)

The algebra and geometry of vectors in 3 space. Velocity, acceleration, and curvature. Functions of several variables. Partial derivatives and the chain rule. Applications to max/min problems, Lagrange multipliers. (Prereq 1261. Limited to 30)

Fall Qtr, ★Sec 1, MW, 6:10-8, VinH 311

Fall Qtr, ★Sec 2, TTh, 6:10-8, VinH 311

Winter Qtr, ★Sec 3, MW, 6:10-8, VinH 313

Spring Qtr, ★Sec 4, TTh, 6:10-8, VinH 311

**Math 3252 MULTIVARIABLE INTEGRAL CALCULUS.** 4 credits, §3311, tuition\*: Resident \$374; Non-resident \$1084.60. (IS)

Double and triple integrals; change of variable procedures, with emphasis on polar and spherical coordinates; mass and centroid; integration on curves and surfaces; vector fields and the theorems of Green, Gauss, and Stokes. (Prereq 3251 or equivalent. Limited to 30)

Fall Qtr, ★Sec 1, MW, 6:10-8, VinH 311

Winter Qtr, ★Sec 2, MW, 6:10-8, VinH 211

Spring Qtr, ★Sec 3, TTh, 6:10-8, VinH 211

**Math 3261 DIFFERENTIAL EQUATIONS WITH LINEAR ALGEBRA.** 4 credits, §3221, §3321, tuition\*: Resident \$374; Non-resident \$1084.60.

A basic course in differential equations, including first order equations, linear equations with constant coefficients, and linear systems. Companion topics from linear algebra, general vector spaces, independence, spanning sets, basis, dimension, eigenvalues, eigenvectors. (Prereq 1261 or 1241. Limited to 30)

Fall Qtr, ★Sec 1, MW, 6:10-8, VinH 313

Winter Qtr, ★Sec 2, TTh, 6:10-8, VinH 311

Spring Qtr, ★Sec 3, MW, 6:10-8, VinH 311

**Math 3311 LINEAR AND NONLINEAR MULTIVARIABLE ANALYSIS II.** 5 credits, tuition\*: Resident \$467.50; Non-resident \$1355.75. (IS)

Differentiation, extreme values, and integration of functions of several variables. *May be used to replace 3251 and 3252.* (Prereq grade of C or better in 1241. Limited to 30)

Fall Qtr, ★Sec 1, TTh, 6:10-8:20, VinH 313

Spring Qtr, ★Sec 2, MW, 6:10-8:20, VinH 313

**Math 5056 THEORY OF INTEREST.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Application of compound interest formulas to annuities, sinking funds, bonds, and similar items. Primarily for mathematics and business majors interested in actuarial science. (Prereq 1241 or equivalent. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr, Sec 1, W, 6:10-9, VinH 213

**Math 5090 CALCULUS REFRESHER.** 5 credits, tuition\*: Resident \$467.50; Non-resident \$1355.75; Resident Graduate credit \$590; Non-resident Graduate credit \$1298; Resident Graduate School credit \$1077.50; Non-resident Graduate School credit \$2370.50.

A course designed for students who have already had calculus, but who have been away from it for a while and need a quick review. This course will cover the topics of a standard course in calculus of one variable: differentiation of elementary functions, differentials, the definite integrals, techniques of integrations, applications of integration, polar coordinates, infinite series, approximation. **May be taken S-N.** (Prereq 1 year calculus. Qualified students may register for graduate credit at the University of Minnesota, except for mathematics majors. Limited to 40)

Fall Qtr, ★Sec 1, TTh, 6:10-8:20, VinH 113

Winter Qtr, ★Sec 2, MW, 6:10-8:20, VinH 113

Spring Qtr, ★Sec 3, MW, 6:10-8:20, VinH 113

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Math 5242-5243 LINEAR ALGEBRA WITH APPLICATIONS.** 4 credits each quarter, tuition\* each quarter: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Systems of linear equations, finite dimensional linear spaces, bases, linear transformations, matrices, determinants, eigenvalues, reduction to canonical forms, quadratic and bilinear forms, applications. (Prereq 1241 or 1261 or 3511 or equivalent. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr, 5242, Sec 1, W, 6:10-9, VinH 207

Winter Qtr, 5243, Sec 1, W, 6:10-9, VinH 207

**Math 5245 INTRODUCTION TO MODERN ALGEBRA I.** 4 credits, \$5282, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Basic algebra course, a more concrete level than 5282-5283-5284. Group theory including normal subgroups, homomorphism, automorphism, the theory of Lagrange and rings and fields. Linear algebra including rings, polynomial rings and fields. Linear algebra including an abstract approach to vector spaces and their linear transformations, and their structure. (Prereq 3321, 3221, 3511H, or equivalent. Qualified students may register for graduate credit at the University of Minnesota. Limited to 30)

Spring Qtr, ★Sec 1, W, 6:10-9, VinH 207

**Math 5606-5607 ADVANCED CALCULUS: A RIGOROUS APPROACH.** 4 credits each quarter, \$5612, tuition\* each quarter: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Analysis on the real line, introduction to logic and proof, construction of the real numbers, completeness of the real numbers, infinite sequences and series, continuity of functions, derivatives, Riemann integrals, convergence of sequences and series of functions. (Prereq 2 years of calculus. Qualified students may register for graduate credit at the University of Minnesota. Limited to 30)

Fall Qtr, 5606, ★Sec 1, T, 6:10-9, VinH 207

Winter Qtr, 5607, ★Sec 1, T, 6:10-9, VinH 207

**Math 5608 MULTIVARIABLE ADVANCED CALCULUS.** 4 credits, tuition\* : Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Continuity for vector valued functions; the derivative as a linear mapping; the differential matrix; implicit function theory; multivariable integration theory and related topics. Course is slightly below the level of 5612-5613-5614, but well above the 3xxx level. (Prereq 5606, 5607. Qualified students may register for graduate credit at the University of Minnesota. Limited to 30)

Spring Qtr, ★Sec 1, T, 6:10-9, VinH 207

**Math 5679 PROBABILITY.** 4 credits, \$5681, tuition\* : Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Elementary principles of probability, total and compound probability, expectation, repeated trials, and topics chosen from the following: Stirling formula, the probability integral, geometrical probability, probability of causes, Bayes theorem, errors of observation, principle of least squares. (Prereq 3252 or equivalent. Qualified students may register for graduate credit at the University of Minnesota. Limited to 30)

Spring Qtr, ★Sec 1, Th, 6:10-9, VinH 207

## Mathematics Education (MthE)

(125 Peik Hall: 625-6372)

**College of Education and Human Development**  
(Department of Curriculum and Instruction)

Textbooks for most MthE courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

Rob Orton, Associate Professor  
Eric Pandiscio, Lecturer  
Thomas Post, Professor  
James E. Stochl, Professor

*These courses are subject to frequent changes in time and rooms. Check for correct day, time, and room in a day school class schedule.*

**Master's Degree**—A Master of Education degree with a focus in Teacher Leadership is available through the departments of Curriculum and Instruction and Educational Policy and Administration. For more information, see page 161.

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



*Enrollments in limited classes in this department are strictly enforced. Neither the department nor the course instructor will give written permission for registration in these classes once the limit is reached and the class closes. However, you may check for openings in day school.*

**MthE 5101 WORKSHOP: ELEMENTARY SCHOOL MATHEMATICS.** 1-12 cr (max 12 cr). This offering 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Modern trends, methods, and materials used to convey mathematical ideas. Not open to majors in mathematics education. **Must be taken A-F.** (Prereq #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students) Spring Qtr, ★○Sec 1, W, 4:30-7:15, PeikH 31, Stochl

**MthE 5170 TEACHING PROBLEM SOLVING, REASONING, AND PROOF.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Fundamental concepts and principles of problem solving, reasoning, and proof. Emphasis on activities and applications appropriate for junior and senior high classes. Pedagogical experiences to prepare teachers to teach problem solving, reasoning, and proof in classrooms. **Must be taken A-F.** (Prereq math ed or grad student or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Winter Qtr, ★○Sec 1, Th, 4:30-8, PeikH 375, Stochl

**MthE 5311 TEACHING AND SUPERVISION OF MATHEMATICS CLASSROOM IN THE ELEMENTARY SCHOOL.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Present practices and trends in methods, evaluation, and diagnosis; objectives, psychology, and philosophy related to improvement of instruction. **Must be taken A-F.** (Prereq Elem 3391 or CI 5821 or #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 5312. A joint Day/Extension class limited to 15 Extension students)

Fall Qtr, ★○Sec 1, T, 4:30-7:15, PeikH 365, Stochl

**MthE 5312 TEACHING AND SUPERVISION OF MATHEMATICS CLASSROOM IN THE SECONDARY SCHOOL.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Methods, materials, and curriculum development; principles of learning; review of research; preparation and evaluation of tests, units, and materials of instruction. **Must be taken A-F.** (Prereq mathematics teaching experience or #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 5311. A joint Day/Extension class limited to 15 Extension students)

Fall Qtr, ★○Sec 1, T, 4:30-7:15, PeikH 365, Stochl

**MthE 5321 MATERIALS LABORATORY FOR ELEMENTARY SCHOOL MATHEMATICS INSTRUCTION.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Printed and programmed materials, audiovisual techniques of using mathematical devices and instruments. **Must be taken A-F.** (Prereq 5311, 5821 or Elem 3391 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Winter Qtr, ★○Sec 1, T, 4:30-7:15, PeikH 375, Pandiscio

**MthE 5322 MATERIALS LABORATORY FOR SECONDARY SCHOOL MATHEMATICS INSTRUCTION.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Sources and types of materials; laboratory projects and techniques of using mathematics devices and instruments, visual aids, and community resources. **Must be taken A-F.** (Prereq 5312 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Winter Qtr, ★○Sec 1, T, 4:30-7:15, PeikH 375, Pandiscio

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**MthE 5331 CURRENT DEVELOPMENTS IN ELEMENTARY SCHOOL MATHEMATICS INSTRUCTION.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Contemporary literature, trends and experimentation with content; criteria for program evaluation. **Must be taken A-F.** (Prereq 5311 or #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 5332. A joint Day/Extension class limited to 6 Extension students)

Spring Qtr, ★●Sec 1, T, 4:30-7:15, PeikH 375, Stochl

**MthE 5332 CURRENT TRENDS AND ISSUES IN SECONDARY SCHOOL MATHEMATICS INSTRUCTION.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Recent developments in mathematics curriculum and instructional alternatives; issues in teaching and learning, providing for special student needs; program planning and evaluation. **Must be taken A-F.** (Prereq 5312 or #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 5331. A joint Day/Extension class limited to 6 Extension students)

Spring Qtr, ★●Sec 1, T, 4:30-7:15, PeikH 375, Stochl

**MthE 5355 MATHEMATICS FOR SLOW LEARNING CHILDREN.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Units of instruction emphasizing mathematical concepts essential for vocational competence; experimental materials and methods designed to improve performance of low achievers. **Must be taken A-F.** (Prereq 5311 or 5821 or Elem 3391 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Fall Qtr, ★●Sec 1, M, 4:30-7, PeikH 375, Pandiscio

Spring Qtr, ★●Sec 2, T, 4:30-7:15, PeikH 385, Post

**MthE 5366 TECHNOLOGY-ASSISTED MATHEMATICS INSTRUCTION.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Technology, including computers, programmable and graphing calculators, and video, as instructional tools in mathematics; design and evaluation of technology-based mathematics lessons; the effect of technology on the mathematics curriculum; managing the technology-enriched classroom. **Must be taken A-F.** (Prereq 5362 or CISy 5006 or equivalent, math ed or grad student or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension students)

Fall Qtr, ★●Sec 1, Th, 4:30-7:15, PeikH 355, Stochl

**Day School Classes**—In addition to the Extension Classes listed above, day school classes are sometimes offered to educators during late afternoon, early evening, and weekend hours. For registration information about day school College of Education and Human Development courses, see page 160 or call 625-6501.

## Mechanical Engineering (ME)

(121 Mechanical Engineering: 625-5842)

### Institute of Technology

Textbooks for most ME courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

(See also engineering projects in Research Explorations, page 475)

Your attention is called to the Undergraduate Development Certificate in Mechanical Engineering—95 credits, page 536.

Students interested in degrees and certificates in Mechanical Engineering should see the Degrees and Certificates section of this Bulletin.

Sant Ram Arora, Professor  
Al Baldwin, Instructor  
Avram Bar-Cohen, Professor  
Tasfahun Berhe, Lecturer  
Arthur G. Erdman, Professor  
Darrell A. Frohrib, Professor  
Virgil A. Marple, Professor  
J.W. Ramsey, Professor  
Ephraim M. Sparrow, Professor  
Paul J. Strykowski, Associate Professor

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

Through registration in Extension Classes, students may earn all but approximately 24-30 credits towards a Bachelor's degree in Mechanical Engineering. The degree may then be completed after a limited amount of day school attendance or through University-Industry Television for Education (UNITE). **Students who plan to complete a degree program in Mechanical Engineering must follow the admission and residency requirements of the Institute of Technology. (See chart on page 516.)**

A student may not transfer upper division courses into the M.E. degree program unless he or she previously has been admitted to the Upper Division in the Mechanical Engineering curriculum and has the written prior approval of the department. *Extension courses taken while a student is on academic probation may not be applied toward graduation requirements or removal of probationary conditions without the explicit prior permission of the Mechanical Engineering Scholastic Standards Committee.* It is the responsibility of the student to follow these rules.

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Mechanical Engineering. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**ME 0001C REFRESHER COURSE FOR MECHANICAL ENGINEERS.** No credit, tuition\*: \$238.50.

Review of mechanical engineering fundamentals in preparation for Minnesota Professional Engineering Examination. Designed to assist the mechanical engineer to prepare for the examination by presenting an organized review of topics in the mechanical engineering program. Emphasis is on problem solving, organization of information and notes, and trial examinations. **Must be taken S-N.** (No prereq)  
Winter Qtr, Sec 1, Th, 6:10-8:40, MechE 212, Baldwin

**ME 1025 (formerly EG 1025) ENGINEERING GRAPHICS.** 4 credits, \$EG 1025, tuition\*: Resident \$318; Non-resident \$922.20.

Engineering representation in pictorial and multiview; sketching techniques, size description, standard and simplified practices applied to graphical communication. Analysis of systems of projection; correlation of graphical, numerical, and computer solutions of space problems, intersections, and development. Methods of computer-aided graphics. *Textbooks plus supplies for this course*

*cost approximately \$100.* (Prereq Math 1251 or equivalent. Limited to 50)

Fall Qtr, ★Sec 1, M, 6:10-9:30, Arch 10, Berhe  
Spring Qtr, ★Sec 2, M, 6:10-9:30, Arch 10, Berhe

**ME 3201 MECHANICAL ENGINEERING SYSTEMS ANALYSIS.** 4 credits, \$AEM 3401, tuition\*: Resident \$374; Non-resident \$1084.60.

Determination of response of engineering systems utilizing transfer function representation. Analogies between engineering systems based upon transfer function equivalence. (Prereq AEM 3036, upper division MechE or AEM major, or practicing professional with bachelor's degree in engineering. Limited to 60)

Spring Qtr, ★Sec 1, W, 6:10-9:30, MechE 221

**ME 3203 ANALYSIS OF MECHANISM SYSTEMS.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60.

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, upper division MechE or AEM major, ME 3020, or practicing professional with bachelor's degree in engineering)

Fall Qtr, Sec 1, W, 6:10-9:30, Arch 10

**ME 3205 ENGINEERING SYSTEMS DESIGN.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60.

Application of fundamental concepts to the design of typical mechanical components. Engineering approach to the analysis and synthesis of machines and systems. Specification of materials in engineering design. Optimum design criteria. (Prereq AEM 3016, upper division MechE major, or practicing professional with bachelor's degree in engineering)  
Winter Qtr, Sec 1, W, 6:10-9:30, Arch 50

**ME 3301 THERMODYNAMICS.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60.

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 1052 or equivalent or Phys 1253 and Math 3261 or equivalent. Limited to 45)

Fall Qtr, ★Sec 1, T, 6:10-9:30, Arch 10

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**ME 3303 APPLIED THERMODYNAMICS.** 4 credits, §3305, tuition\*: Resident \$374; Non-resident \$1084.60.

Application of laws of thermodynamics to chemically reacting systems and engineering systems. Vapor cycles, gas engine cycles, propulsion systems, refrigeration and air-water vapor mixtures. (Prereq 3301 or equivalent, upper division MechE or AEM major, or practicing professional with bachelor's degree in engineering. Limited to 45) Winter Qtr, ★Sec 1, T, 6:10-9:30, Arch 10

**ME 3701-3702 BASIC MEASUREMENTS LABORATORY I AND II.** 2 credits each quarter, tuition\* each quarter: Resident \$187; Non-resident \$542.30.

Treatment of experimental data, analysis and study of experimental systems via the computer. Static and dynamic characteristics of measurement systems. Fundamental principles of measurement and calibration. Measurement of temperature, pressure, vacuum, humidity, density, viscosity, heating values, speed, power, force, stress-strain, and radioactivity. Courses meet concurrently. (Prereq 3301 and upper division MechE major for 3701; 3701 and upper division MechE major for 3702. 1 lect and 2 lab hrs per wk. Each section limited to 30)

Spring Qtr, 3701, ★Sec 1, Th, 6:30-9:30, Arch 50  
Spring Qtr, 3702, ★Sec 1, Th, 5:30-8:30, Arch 55

**ME 3741-3742-3743 INDUSTRIAL ASSIGNMENT.** 2 credits each quarter, tuition\* each quarter: Resident \$187; Non-resident \$542.30

Industrial work assignment in engineering co-op program. Evaluation based on formal written report accomplished by the student covering the quarter's work assignment and self-study in a technical area related to the work assignment. **Note:** 3743 is an optional substitute for only one of the required courses ME 5741 or 5742. (Prereq registration in Engineering Co-op Program with written permission of the director of the co-op program for 3741; 3741 for 3742. A joint Day/Extension class)

Fall Qtr, 3741, ○Sec 1, Arr, Marple  
Fall Qtr, 3742, ○Sec 1, Arr, Marple  
Fall Qtr, 3743, ○Sec 1, Arr, Marple  
Winter Qtr, 3741, ○Sec 2, Arr, Marple  
Winter Qtr, 3742, ○Sec 2, Arr, Marple  
Winter Qtr, 3743, ○Sec 2, Arr, Marple  
Spring Qtr, 3741, ○Sec 3, Arr, Marple  
Spring Qtr, 3742, ○Sec 3, Arr, Marple  
Spring Qtr, 3743, ○Sec 3, Arr, Marple

**ME 3900 INTRODUCTION TO ENGINEERING STATISTICS.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60.

Elements of probability, descriptive statistics, binomial and Poisson distributions; normal distribution, estimation, hypothesis testing, regression analysis and analysis of variance. (Prereq Math 1261 or equivalent)

Fall Qtr, Sec 1, W, 6:10-9:10, MechE 221

**ME 5205 CREATIVITY IN ENGINEERING DESIGN.** 3 or 4 credits, tuition\* each credit: Resident \$93.50; Non-resident \$271.15; Resident Graduate credit \$118; Non-resident Graduate credit \$259.60; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

The role of creative action at various stages in the design process. Creative decision making in developing design criteria, alternative solutions, and their evaluation. *1 cr term paper option.* (Prereq IT or grad student; completion of ME core courses or equivalent desirable. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr, Sec 1, Th, 6:10-9:10, MechE 221

**ME 5225 FINITE ELEMENTS IN MECHANICAL DESIGN.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Introduction to the fundamentals of finite element analysis, oriented toward mechanical engineering design applications. Includes extensive examples from industry and student projects involving actual set-up and solution of descriptive problems using industry-accepted analysis codes and interactive graphics for model generation. **Must be taken A-F.** (Prereq 3205, 5342 and programming; IT or grad. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr, Sec 1, M, 4:15-7, MechE 18

**ME 5254 DESIGN MORPHOLOGY WITH APPLICATIONS.** 4 credits. Tentatively scheduled for Summer 1996.

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**ME 5342 HEAT TRANSFER.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

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, CE 3400 or AEM 3200, IT upper div or grad, or equivalent. Not open for graduate credit to M.E. students. Other qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr, Sec 1, T, 6:10-9:30, Arch 10, Sparrow

**ME 5344 THERMODYNAMICS OF FLUID FLOW.** 4 credits, §AEM 5201, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Compressible flow of gases in engineering systems such as noHles, 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 and CE 3400 or AEM 3200 or equivalent. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr, Sec 1, T, 6:10-9:30, Arch 25, Sparrow

**ME 5345 HEAT TRANSFER IN ELECTRONIC EQUIPMENT.** 4 credits. **Tentatively scheduled for Winter 1997.**

**ME 5603 THERMAL ENVIRONMENTAL ENGINEERING.** 4 credits. **Tentatively scheduled for Fall 1996 and alternate years thereafter.**

**ME 5712 SOLAR ENERGY UTILIZATION.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

History and potential of solar energy use; availability of solar radiation on clear and cloudy days; incident radiation on horizontal, vertical, and inclined surfaces; flat-plate and concentrating solar collectors; heating and cooling with solar energy; power generation; review of current research. (Prereq IT or grad student, 3303, 5342. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr, Sec 1, T, 6:10-9:10, MechE 221, Ramsey

**ME 5741-5742 INDUSTRIAL ASSIGNMENT AND DESIGN PROJECT.** 4 credits each quarter, tuition\* each quarter: Resident \$374; Non-resident \$1084.60.

**Note:** Evaluation and credit will be based upon a written report describing a design-oriented project, preferably one that is work based. (Prereq 3742 and #. May not be taken for graduate credit. A joint Day/Extension class)

Fall Qtr, 5741, ●Sec 1, Arr, Marple

Fall Qtr, 5742, ●Sec 1, Arr, Marple

Winter Qtr, 5741, ●Sec 2, Arr, Marple

Winter Qtr, 5742, ●Sec 2, Arr, Marple

Spring Qtr, 5741, ●Sec 3, Arr, Marple

Spring Qtr, 5742, ●Sec 3, Arr, Marple

## Medical Terminology

(See Health Science Units, page 233)

## Medieval Studies (MeSt)

(304 Walter Library: 626-0805)

### College of Liberal Arts

#### Center for Medieval Studies

Textbooks for most MeSt courses are available at University of Minnesota bookstore—East Bank in Williamson Hall (625-6000).

F.R.P. Akehurst, Professor of French and Italian  
Bernard S. Bachrach, Professor of History

John W. Steyaert, Associate Professor of Art History

**MeSt 1001 THE MIDDLE AGES: AN INTRODUCTION TO MEDIEVAL STUDIES.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

An introduction to the field of Medieval Studies. Selected topics from the history, art, literature, and culture of the Western European Middle Ages, with an emphasis on interdisciplinary methods of approach. (No prereq. Limited to 40)

Winter Qtr, ★Sec 1, T, 6-8:30, NichH 216

(See also CSch 0301, Merry Medieval Life in Britain, Ireland, and Scandinavia)

**MeSt 3610 TOPICS IN MEDIEVAL STUDIES: HISTORY OF MEDIEVAL ART.** 4 credits, §ArH 3009, tuition\* (includes \$5 course fee): Resident \$349; Non-resident \$1002.60.

Medieval architecture, painting, and sculpture from early Christian through Gothic periods. (No prereq. Meets concurrently with ArH 3009. Limited to 5)

Fall Qtr, ★Sec 1, M, 4-6:30, FolH 306, Steyaert

(See also CSch 0208, From Cathedrals and Courts: Music of the Middle Ages)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**MeSt 3610 TOPICS IN MEDIEVAL STUDIES: MEDIEVAL MILITARY HISTORY.** 4 credits, §Hist 3609, tuition\*: Resident \$344; Non-resident \$997.60.

Concept and conduct of war in Western Europe in the Middle Ages and the relation between military organization and society. (No prereq. Meets concurrently with Hist 3609. Limited to 5)

Winter Qtr, ★Sec 2, W, 6:20-8:50, RarigC 610, Bachrach

**MeSt 3610 EUROPEAN HERITAGE: MIDDLE AGES.** 4 credits, §ClCv 3950, §Hum 1115, 3115., §Rhet 3322, tuition\*: Resident \$344; Non-resident \$997.60.

Sixth to 14th centuries: growth of Christendom; monasticism, feudalism and courtly love; rise of towns and universities. Art and architecture: Byzantine, Romanesque, and Gothic. Music: Gregorian chant, minstrelsy, liturgical drama. Literature: epic, romance; Dante. Islam. Scholastic philosophy: Abelard, Aquinas. (No prereq. Meets concurrently with Hum 1115, 3115)

Spring Qtr, Sec 3, M, 6:20-8:50, FordH 160, Akehurst

### Medicine

For information on noncredit conferences or workshops in medicine, please contact Office of Continuing Medical Education, Radisson Hotel Metrodome; telephone 626-7600.

(See also History of Medicine)

### Microbiology (MicB)

(1460 Mayo: 624-6190)

#### Medical School

Textbooks for most MicB courses are available at University of Minnesota Bookstore—Health Sciences (625-8600).

Russell Bey, Associate Professor  
Thomas Molitor, Associate Professor

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in MicB. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**Attendance in classes**—Students are expected to attend the first class meeting of every course in which they are registered. Attendance at the first class session of all limited-enrollment classes (designated by a ★ in this bulletin) is required unless students obtain approval for the intended absence before the first meeting. Without this approval, students may lose their place in class to other students. Students who miss the first class and wish to remain in the class must contact the course instructor as soon as possible. Instructors have the right to deny admission if the course is full. Students must officially cancel any course to which they are denied admission after registering.

**MicB 3103 GENERAL MICROBIOLOGY.** 5 credits, §5105, §Biol 5013, §VPB 3103. Offered alternate years. Tentatively scheduled for Fall 1996.

**MicB 5218 IMMUNOLOGY.** 3 credits, tuition\*: Resident \$450; Non-resident \$990; Resident Graduate credit \$450; Non-resident Graduate credit \$990; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Cellular, protein, and genetic bases of humoral immunity; methods used to measure antibodies and antigens. T lymphocytes: interaction of T helper cells with B lymphocytes and other T cells in cell-mediated immunity. Clinical immunology: immunodeficiency, allergy, autoimmunity, transplantation. (Prereq BioC 3021. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr, Sec 1, TTh, 6:15-7:45, MoosT 2-620, Molitor

### Middle Eastern Languages and Cultures

(See Area Studies Programs; and the Institute of Languages and Literatures)

### Military Science (Mil)

(110 Armory: 624-7300)

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Military Science. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Minnesota Courses

(For courses about the State of Minnesota, see the following departments: History; Geography; Compleat and Practical Scholar noncredit courses; and Compleat Scholar Weekends)

## Minnesota Extension Service

Minnesota Extension Service (MES) is a major educational outreach arm of the University of Minnesota. Its mission is to involve people in improving the quality of life and enhancing the economy and the environment through education, applied research and the resources of the University of Minnesota.

In its 80-plus years of service to Minnesotans, MES continues to direct and define its programs by the changing issues facing citizens and what they ask of their land-grant university to help them deal with those issues. MES extends the University by a network of faculty on campus and in every county, expedited by a statewide computer and satellite downlink system; over 30,000 volunteers; and by collaborative relationships with other agencies and organizations—schools, churches, human services, local governments—to help identify, prioritize, and meet individual and community educational needs. For general information, call the Dean and Director's office (624-1222); for information on insect and plant problems, call DIAL U, a user fee service (off-campus, 1-976-0200; secretary, 624-5353); for other information, call your local county extension office.

## Modern Greek

(See Classical and Near Eastern Studies)

## Music (Mus)

(100 Ferguson Hall: 624-5740)

### College of Liberal Arts

Most textbooks for Mus courses are available at University of Minnesota Bookstore—West Bank (625-3000).

(See also music courses in General College; Music Education; and Compleat Scholar noncredit section)

John E. Anderson, Professor  
Mark P. Bjork, Assistant Professor  
Michael Cherlin, Associate Professor

David Damschroder, Associate Professor  
James Hepokoski, Professor  
Babette Lightner, Lecturer  
Peter S. Mensah, Teaching Specialist in African and Afro-American Studies  
Stephen Schultz, Associate Professor of Music Education  
Rebecca P. Shockley, Associate Professor  
Clifton Ware, Associate Professor

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Music. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**Mus 1051-1052-1053 PIANO CLASS FOR NON-MUSIC MAJORS.** 2 credits each quarter, tuition\* each quarter: Resident \$159; Non-resident \$461.10.

A beginning course for non-music majors with little or no keyboard background. Emphasis on functional skills, such as reading, harmonizing, playing by ear and improvising, along with basic technique and elementary repertoire. (No prereq for 1051; 1051 for 1052; 1052 for 1053. Limited to 16)

Fall Qtr, 1051, ★Sec 1 M, 6:15-8:15, FergH 259

Fall Qtr, 1051, ★Sec 2, MW, 4:40-5:30, FergH 259

Fall Qtr, 1051, ★Sec 3, T, 6:15-8:15, FergH 259

Fall Qtr, 1051, ★Sec 4, W, 6:15-8:15, FergH 259

Winter Qtr, 1051, ★Sec 5, M, 6:15-8:15, FergH 259

Winter Qtr, 1051, ★Sec 6, MW, 4:40-5:30, FergH 259

Winter Qtr, 1051, ★Sec 7, W, 6:15-8:15, FergH 259

Winter Qtr, 1052, ★Sec 1, T, 6:15-8:15, FergH 259

Spring Qtr, 1051, ★Sec 8, M, 6:15-8:15, FergH 259

Spring Qtr, 1051, ★Sec 9, MW, 4:40-5:30, FergH 259

Spring Qtr, 1053, ★Sec 1, T, 6:15-8:15, FergH 259

Spring Qtr, 1052, ★Sec 2, W, 6:15-8:15, FergH 259

**Mus 1160 VOICE: CLASS LESSONS.** 2 credits, tuition\*: Resident \$159; Non-resident \$461.10.

Fundamentals of healthy voice production in speaking and singing—posture, relaxation, breathing/breath management, tone placement, diction and vocal hygiene. Vocal Performance skills learned in the study and performance of simple songs. (Prereq: ability to learn and perform simple songs. Limited to 16)

Fall Qtr, ★Sec 1, M, 6:15-8:15, FergH 90, Ware

Winter Qtr, ★Sec 2, T, 6:15-8:15, FergH 90, Ware

Spring Qtr, ★Sec 3, M, 6:15-8:15, FergH 90, Ware

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Mus 1171-1172 GUITAR: CLASS LESSONS.** 2 credits each quarter, tuition\* each quarter: Resident \$159; Non-resident \$461.10.

Fundamentals for the beginning guitarist. Progressive development of skills. **1171:** basic strumming techniques, harmonizations in basic keys. **1172:** advanced strumming techniques, bass runs, finger-picking strums. Students must furnish acoustic guitar. (No prereq for 1171; 1171 or # for 1172; 1171 and 1172 meet concurrently. Limited to 16)

Fall Qtr, 1171, ★Sec 1, T, 6:15-8:15, FergH 123

Fall Qtr, 1171, ★Sec 2, Th, 6:15-8:15, FergH 123

Winter Qtr, 1171, ★Sec 3, T, 6:15-8:15, FergH 203

Winter Qtr, 1171, ★Sec 4, T, 6:15-8:15, FergH 203

Winter Qtr, 1172, ★Sec 1, Th, 6:15-8:15, FergH 203

Spring Qtr, 1171, ★Sec 5, T, 6:15-8:15, FergH 123

Spring Qtr, 1171, ★Sec 6, T, 6:15-8:15, FergH 123

Spring Qtr, 1172, ★Sec 2, Th, 6:15-8:15, FergH 123

### Group performance

School of Music ensembles are available through joint Day/Extension enrollment. An audition should be arranged with the instructor in advance of the class opening. Telephone 624-5056 for information.

### Music theory, history, literature, pedagogy

**Mus 1001 FUNDAMENTALS OF MUSIC.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20. (IS)

Investigation of music notation and fundamental concepts underlying musical structure. Intervals, clefs, chords, scales, cadences, harmonic analysis; rhythm and meter. Emphasis on active participation: playing the piano, singing, clapping rhythms, aural perception. Weekly laboratory assignments in vocal and piano performance. (No prereq. Limited to 30)

Fall Qtr, ★Sec 1, M, 6:15-9:45, FergH 105

Fall Qtr, ★Sec 2, Th, 6:15-9:45, FergH 105

Winter Qtr, ★Sec 3, T, 6:15-9:45, FergH 105

Winter Qtr, ★Sec 4, Th, 6:15-9:45, FergH 105

Spring Qtr, ★Sec 5, T, 6:15-9:45, FergH 105

Spring Qtr, ★Sec 6, Th, 6:15-9:45, FergH 105

(See also CSch 0203, Fundamentals of Music)

**Mus 1003 INTRODUCTION TO MUSIC THEORY.** 2 credits, tuition\*: Resident \$159; Non-resident \$461.10.

Fundamental concepts of music theory and notation, including key signatures, scales, rhythm, and chordal construction. See Mus 1004 below; 1004 meets immediately after 1003. **Must be taken A-F.** (Prereq music major or #)

Winter Qtr, Sec 1, MTh, 6:15-7:05, FergH 123

**Mus 1004 INTRODUCTION TO EAR TRAINING.** 2 credits, tuition\*: Resident \$159; Non-resident \$461.10.

Fundamental concepts of ear training and sight singing, with emphasis upon intervals, scales, and basic rhythmic patterns. See Mus 1003 above; 1003 meets immediately before 1004. (Prereq music major or #. Limited to 20)

Winter Qtr, ★Sec 1, MTh, 7:15-9, FergH 123

**Mus 1507-1508 THEORY REVIEW I-II.** 3 credits each quarter, tuition\* each quarter: Resident \$238.50; Non-resident \$691.65.

Melodic and harmonic structure. See also Mus 1531, Theory I. **Must be taken A-F.** (Prereq placement exam. Limited to 20)

Fall Qtr, 1507, ★Sec 1, TTh, 7:15-9, FergH 149

Winter Qtr, 1508, ★Sec 1, TTh, 7:15-9, FergH 149

**Mus 1511 EAR-TRAINING AND SIGHT-SINGING I.** 1 credit, tuition\*: Resident \$79.50; Non-resident \$230.55. (IS)

Melodic, harmonic, and rhythmic dictation; sight-singing; clef-reading; musicianship drills. See also Mus 1531, Theory I. **Must be taken A-F.** (No prereq. Concurrent registration with Mus 1531 required. Limited to 20)

Spring Qtr, ★Sec 1, MTh, 6:15-7:05, FergH 149

**Mus 1517-1518 EAR-TRAINING AND SIGHT-SINGING REVIEW I-II.** 1 credit each quarter, tuition\* each quarter: Resident \$79.50; Non-resident \$230.55.

Aural skills: sight-singing, interval recognition, melodic and harmonic dictation. See also Mus 1531, Theory I. **Must be taken A-F.** (Prereq placement exam. Limited to 20)

Fall Qtr, 1517, ★Sec 1, TTh, 6:15-7:05, FergH 149

Winter Qtr, 1518, ★Sec 1, TTh, 6:15-7:05, FergH 149

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



**Mus 1531 THEORY I: FOUNDATIONS OF TONAL THEORY.** 3 credits, tuition\*: Resident \$238.50; Non-resident \$691.65. (IS)

Two-part counterpoint (species approach); consonance and dissonance; melodic contours; review of music fundamentals. **Note:** Music theory courses and their corresponding ear-training labs (Mus 1511 and 1531; 1507 and 1517; 1508 and 1518) must be elected concurrently unless the student demonstrates proficiency in one or the other area through the Music Theory Placement Exam, offered by the School of Music at the beginning of each term. *Call 624-5740 for exam date and time.* Mus 1511 and 1531 require prior exposure to music fundamentals. Students who have not completed 1003/1004 at the University must demonstrate their proficiency through a special Entrance Examination offered periodically throughout the year. *Call 624-5740 for dates and times.* **Must be taken A-F.** (No prereq. Limited to 20)  
Spring Qtr, ★Sec 1, MTh, 7:15-9, FergH 149

**Mus 1804 WORLD MUSIC.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Music in universal perspectives. Traits, distinguishing styles, and cultural factors that influence musical creativity. Music of different cultures compared to examine forms and traits, to develop listening abilities, and to develop an understanding of human musical expressions. (No prereq. Limited to 20)  
Winter Qtr, ★Sec 1, MW, 7:15-9:10, FergH 107, Mensah

(See also CSch 0207, *Discovering the Drama of Russian Music*)

**Mus 3021 INTRODUCTION TO MUSIC.** 5 credits, tuition\*: Resident \$430; Non-resident \$1247.

Introduction to music in the repertory of our culture, exploring selected forms and styles from the 17th through 20th centuries. Aural analyses, relationships of large units of musical form. (No prereq)  
Fall Qtr, Sec 1, W, 6-10, FergH 105, Hepokoski  
Winter Qtr, Sec 2, W, 6-10, FergH 105, Hepokoski  
Spring Qtr, Sec 3, W, 6-10, FergH 105, Hepokoski

**Mus 3707 AFRICAN MUSIC.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Study of music in various African traditions in social and historical context. Interrelationships between music and society (function, context, structure, gender roles, political considerations). Instruments, life-cycle rites, genres, musical organization, traditional musicians, contemporary popular music. (No prereq)  
Fall Qtr, Sec 1, MW, 7:15-9:10, FergH 107, Mensah

**Mus 5150 BODY AWARENESS IN ACTIVITY: THE ALEXANDER TECHNIQUE FOR MUSICIANS.** 2 credits each quarter, tuition\*: Resident \$172; Non-resident \$498.80; Resident Graduate credit \$236; Non-resident Graduate credit \$519.20; Resident Graduate School credit \$431; Non-resident Graduate School credit \$948.20.

Introduction to the Alexander Technique with specific applications to music performance. Emphasis on body/mind awareness to promote technical ease and freedom. *Sections will be offered only if there is sufficient enrollment of 10 or more students each quarter.* **May be repeated for credit.** (Prereq music major or #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 12)

Fall Qtr, ★Sec 1, Th, 6:15-8:15, FergH 107

Spring Qtr, ★Sec 2, Th, 6:15-8:15, FergH 107

**Mus 5321-5322-5323 SUZUKI VIOLIN PEDAGOGY.** 2 credits each quarter, tuition\* each quarter: Resident \$172; Non-resident \$498.80; Resident Graduate credit \$236; Non-resident Graduate credit \$519.20; Resident Graduate School credit \$431; Non-resident Graduate School credit \$948.20.

An intensive examination of the philosophy and teaching techniques of Japanese pedagogue Shinichi Suzuki, and their applications in Western culture. Students will be involved with discussions, playing experience, and observations of children's lessons in the MacPhail Center Suzuki Program, 1128 LaSalle Ave. in downtown Minneapolis. **For information about the course, contact Mark Bjork at 625-3328.** (Prereq undergrad or grad string major with violin as principal performing instrument or #; 5321 for 5322; 5322 for 5323. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, 5321, ●Sec 1, W, 12:20-2:15, FergH 203, Bjork

Winter Qtr, 5322, ●Sec 1, W, 12:20-2:15, FergH 203, Bjork

Spring Qtr, 5323, ●Sec 1, W, 12:20-2:15, FergH 203, Bjork

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Mus 5324-5325-5326 ADVANCED SUZUKI VIOLIN PEDAGOGY.** 2 credits each quarter, tuition\* each quarter: Resident \$172; Non-resident \$498.80; Resident Graduate credit \$236; Non-resident Graduate credit \$519.20; Resident Graduate School credit \$431; Non-resident Graduate School credit \$948.20.

An intensive examination of techniques for the intermediate and advanced violin student using the techniques of Shinichi Suzuki in Western society. Class will involve discussion, playing experience, and observation of children's lessons in the MacPhail Center Suzuki Program (1128 LaSalle Ave. in downtown Minneapolis) and practical teaching experience. **For information about the course, contact Mark Bjork at 625-3328.** (Prereq 5323 or equiv or # plus an audition for 5324; 5324 for 5325; 5325 for 5326. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, 5324, ●Sec 1, T, 9:05-10:30 a.m.,  
FergH 224, Bjork

Winter Qtr, 5325, ●Sec 1, T, 9:05-10:30 a.m.,  
FergH 224, Bjork

Spring Qtr, 5326, ●Sec 1, T, 9:05-10:30 a.m.,  
FergH 224, Bjork

**Mus 5351-5352-5353 PIANO PEDAGOGY.** 2 credits each quarter, tuition\* each quarter: Resident \$172; Non-resident \$498.80; Resident Graduate credit \$236; Non-resident Graduate credit \$519.20; Resident Graduate School credit \$431; Non-resident Graduate School credit \$948.20.

Demonstration and discussion of teaching techniques, methods, and materials for group and individual instruction at the elementary and early intermediate levels. (Prereq 12 cr in 1201 or 1301 or # for 5324; 5324 for 5325; 5325 for 5326. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, 5351, ●Sec 1, W, 9:05-11 a.m., FergH  
205, Shockley

Winter Qtr, 5352, ●Sec 1, W, 9:05-11 a.m.,  
FergH 205, Shockley

Spring Qtr, 5353, ●Sec 1, W, 9:05-11 a.m.,  
FergH 205, Shockley

### Music Education (MuEd)

(100 Ferguson Hall: 624-5740)

#### College of Liberal Arts

Textbooks for most MuEd courses available at University of Minnesota Bookstore—West Bank (625-3000).

Robert Borg, Associate Professor  
Charles Furman, Associate Professor  
Paul Haack, Professor  
Claire McCoy, Associate Professor  
Stephen Schultz, Associate Professor

*Enrollments in limited classes in this department are strictly enforced. Neither the department nor the course instructor will give written permission for registration in these classes once the limit is reached and the class closes.*

**MuEd 5111 RESEARCH IN MUSIC EDUCATION: BIBLIOGRAPHY.** 3 credits, tuition\*: Resident \$258; Non-resident \$748.20; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Sources, materials, and techniques. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, ●Sec 1, Th, 4:30-6:45, FergH 70,  
Schultz

**MuEd 5112 RESEARCH IN MUSIC EDUCATION: TECHNIQUES.** 3 credits, tuition\*: Resident \$258; Non-resident \$748.20; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Methods and techniques employed in investigating and reporting of music education problems; review of significant research. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr, ●Sec 1, Th, 4:30-6:45, FergH 151,  
Furman

**MuEd 5115 RESEARCH IN MUSIC EDUCATION: MEASUREMENT.** 3 credits tuition\*: Resident \$258; Non-resident \$748.20; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Current status in music testing; principles; survey of evaluative, accountability, and testing materials in music. **Must be taken A-F.** (Prereq #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr, ●Sec 1, Th, 4:30-6:45, FergH 107,  
McCoy

\* Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**MuEd 5621 SUPERVISION AND ADMINISTRATION OF SCHOOL MUSIC.** 3 credits, tuition\*: Resident \$258; Non-resident \$748.20; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Analysis and evaluation of instructional, supervisory, and administrative techniques; readings, new trends. **Must be taken A-F.** (Prereq #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr, ●Sec 1, M, 4:30-6:45, FergH 157, Borg

**MuEd 5666 MICROCOMPUTERS IN THE MUSIC CLASSROOM.** 3 credits, tuition\*: Resident \$258; Non-resident \$748.20; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Using the microcomputer to enhance instruction; materials for theory, ear training, composition, electronic music; developing a data base for music libraries, instrument inventories, budgets. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Winter Qtr, ★●Sec 1, MTW, 9:05-9:55 a.m., AndH 250, Schultz

**MuEd 5668 COMPUTERIZED MUSIC NOTATION.** 3 credits, tuition\*: Resident \$258; Non-resident \$748.20; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Fundamentals of music notation and printing utilizing the Macintosh computer. MIDI keyboards, and the Finale software program. Preparation of instrumental and vocal scores, part extraction, and page layout. **May be taken A-F or S-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 12)

Fall Qtr, ★Sec 1, T, 6-9, AndH 250, Schultz

Winter Qtr, ★Sec 2, M, 6-9, AndH 250, Schultz

Spring Qtr, ★Sec 3, T, 6-9, AndH 250, Schultz

**MuEd 5750 WORKSHOP: MUSIC EDUCATION: Multicultural Music for Teachers.** 3 credits, tuition\*: Resident \$258; Non-resident \$748.20; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

(No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr, ●Sec 1, M, 4:30-6:45, FergH 107, Haack

**MuEd 5804 MUSIC IN THERAPY.** 3 credits, tuition\*: Resident \$258; Non-resident \$748.20; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Principles and methods related to public school, hospital, and other community mental health and education settings; observation and laboratory sessions. **Must be taken A-F.** (Prereq grad student in mus educ or in mus therapy or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Fall Qtr, ★●Sec 1, Arr, Furman

Winter Qtr, ★●Sec 2, Arr, Furman

Spring Qtr, ★●Sec 3, Arr, Furman

**MuEd 5970 INDEPENDENT STUDY.** 1-4 credits, tuition\* each credit: Resident \$86; Non-resident \$249.40; Resident Graduate credit \$118; Non-resident Graduate credit \$259.60; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Independent study project organized by the student in consultation with the appropriate instructor. (Prereq education or graduate student. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, ●Sec 1, Arr, Borg, Furman, Haack, McCoy, Schultz

Winter Qtr, ●Sec 2, Arr, Borg, Furman, Haack, McCoy, Schultz

Spring Qtr, ●Sec 3, Arr, Borg, Furman, Haack, McCoy, Schultz

*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.*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Day School Classes**—In addition to the Extension classes listed above, day school classes are sometimes offered to educators during late afternoon, early evening, and weekend hours. For registration information about day school College of Education and Human Development courses, see page 160 or call 625-6501.

For further information in regard to planning an individually designed workshop for a particular district or building staff contact: Chairman, Music Education Program, Ferguson Hall (West Bank), University of Minnesota, Minneapolis, MN 55455; or telephone 624-1091.

### Naval Science (Nav)

(203 Armory: 625-6677)

**Joint Day/Extension Classes**—You may register through Extension for most day school classes scheduled before 4 p.m. in Naval Science. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before registration for that quarter begins.

### Near and Middle Eastern Studies

See Area Studies Programs, and the Institute of Languages and Literatures

### Neighborhood Centers

(See page 553)

### Noncredit Classes

(See page 397)

### Norwegian

See Scandinavian Languages

### Nursing (Nurs)

(6-101 Health Sciences Unit F: 624-9600)

#### School of Nursing

Textbooks for most Nurs courses are available at University of Minnesota Bookstore—Health Sciences (625-8600).

(See also Research Explorations, page 474)

Ken Burns, Assistant Professor  
Pat Camillo, Associate Education Specialist  
Bernadine Feldman, Associate Professor  
Marilyne Gustafson, Assistant Professor

Barbara Leonard, Associate Professor  
Kathleen Krichbaum, Assistant Professor  
Marti Kubik, Associate Education Specialist  
Robert McKinnell, Professor, Genetics and Cell Biology  
Deborah Ringdahl, Associate Clinical Specialist  
Muriel B. Ryden, Professor  
Suzanne J. Schoenfelt, Instructor, College of Pharmacy  
Mariah Snyder, Professor

**Nurs 5609 SPECIAL EDUCATIONAL EXPERIENCES IN NURSING: AMERICAN INDIAN HEALTH AND HEALTH CARE.** 2 credits, tuition\*: Resident \$187; Non-resident \$542.30; Resident Graduate credit \$236; Non-resident Graduate credit \$519.20; Resident Graduate School credit \$431; Non-resident Graduate School credit \$948.20.

Examines the health of American Indians primarily in the Upper Midwest and North Central states. Health status and health care are considered within historic and cultural contexts. The epidemiology of major health conditions across the life span are reviewed and discussed together with current Indian health care and traditional Indian medicine and health beliefs and practices. Open to both nursing students and non-nursing students. **May be taken S-N.** (Prereq upper division, graduate student, or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Fall Spec Term, ★○Sec 1, Sa, 8:30 a.m.-4, Oct.

21, Nov. 11, Wilder Retreat Center, 14189

Ostlund Trail North, Marine on St. Croix,

Leonard. *No late fee through Oct. 13*

**Nurs 5609 SPECIAL EDUCATIONAL EXPERIENCES IN NURSING: MENOPAUSE—A MULTIDIMENSIONAL APPROACH.** 2 credits, tuition\*: Resident \$187; Non-resident \$542.30; Resident Graduate credit \$236; Non-resident Graduate credit \$519.20; Resident Graduate School credit \$431; Non-resident Graduate School credit \$948.20.

A study of menopause through an exploration of the physiological, developmental, historical, socio-cultural, nursing, and medical interfaces associated with this uniquely female experience. Issues and research involving hormone replacement therapy will be addressed as well as alternative interventions. **May be taken S-N.** (Prereq for undergraduate credit: upper division student, baccalaureate degree, or R.N. Prereq for graduate credit: R.N. with baccalaureate degree. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Spring Qtr, ★○Sec 2, T, 4:40-6:35, HSUnitF  
4-180, Camillo

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**Nurs 5634 WOMEN'S ISSUES: A HEALTH PERSPECTIVE.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Focuses on exploration and analysis of a wide range of women's health issues. Content includes a multidisciplinary analysis of sexual and reproductive health, victimization, poverty, work, nutrition, physical activity, body image, and mental health, with emphasis on health promotion. Open to both nursing students and non-nursing students. **May be taken S-N.** (Prereq upper division, graduate student, or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Winter Qtr, ★○Sec 1, T, 2:30-5:30, HSUnitF, Ringdahl

**Nurs 5640 COMMON RESPONSE PATTERNS TO ILLNESS.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Exploration of theoretical and clinical perspectives of selected human response patterns found in disruptions in health. The course will provide students with an opportunity to examine nursing phenomena, such as pain or hopelessness, from the perspective of an advanced nurse practitioner. **May be taken S-N.** Offered alternate years. (Prereq for undergraduate credit, R.N.; for graduate credit, R.N. with baccalaureate degree. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Spring Qtr, ★○Sec 1, Th, 4:40-6:35 (plus 1 hr arr), HSUnitF 4-150, Snyder

**Nurs 5642 BEHAVIORAL PROBLEMS IN PERSONS WITH DEMENTIA.** 2 credits. Offered alternate years. Tentatively scheduled for Spring 1997.

**Nurs 5650 THERAPEUTIC TOUCH: PRACTICE AND RESEARCH.** 2 credits. Offered alternate years. Tentatively scheduled for Winter 1997.

**Nurs 5660 BASIC MANAGEMENT IN LONG-TERM CARE FACILITIES: ORGANIZATION MANAGEMENT.** 1-4 credits, tuition\* each credit: Resident \$93.50; Non-resident \$271.15; Resident Graduate credit \$118; Non-resident Graduate credit \$259.60; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Provides a critical basis for the practice of management of nursing in long-term care facilities. Emphasis on analysis of management theory and its relevance to current practice. Course is divided into four modules, 1 credit each: organization management (Oct. 5); organization theory (Oct. 19); organization behavior management (Nov. 9); regulation mechanisms vs. quality (Nov. 30). **Note:** Students wishing to register for fewer than 4 credits must call 624-4866 for instructions. **May be taken S-N.** (Prereq for undergraduate credit, R.N.; for graduate credit, R.N. with baccalaureate degree. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Fall Spec Term, ★○Sec 1, Th, 9 a.m.-5, Oct. 5, 19, Nov. 9, 30, HSUnitF, Krichbaum

**Nurs 5711 SPIRITUALITY AND NURSING PRACTICE.** 2 credits, tuition\*: Resident \$187; Non-resident \$542.30; Resident Graduate credit \$236; Non-resident Graduate credit \$519.20; Resident Graduate School credit \$431; Non-resident Graduate School credit \$948.20.

Exploration of the concept of spirituality as integral to the whole person. Discussion of spiritual nursing care interventions within the context of the nursing process. **May be taken S-N.** May be offered via interactive television between two sites, with students at both locations. (Prereq for undergraduate credit, R.N. with baccalaureate degree. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 20 Extension students)

Spring Qtr, ★○Sec 1, Th, 4:40-6:35, MoosT 5-125, Gustafson

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Nurs 5720 WRITTEN COMMUNICATION SKILLS FOR HEALTH PROFESSIONALS.** 3 credits, §HSU 5017, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Students meet in workshop sessions where they critique the work of class participants. Throughout the course, emphasis is on organization, style, clarity of presentation, conciseness, accuracy, transitions, consistency, and writing mechanics. Students also examine journal articles, style, the work of professional authors, and other writing guidelines. Depending on the interest of class members, some emphasis will be placed on writing journal articles for publication. The course works best for students who are already in the process of writing or trying to publish a paper. The class serves as the structure for students to compose their own work. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with HSU 5017. Limited to a combined total of 15) Winter Qtr, ★Sec 1, T, 4-6:30, MoosT 15-250, Schoenfelt

**Nurs 5738 TRANSCULTURAL NURSING: THEORIES AND ISSUES.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Study of cultural factors which influence theories, issues, and nursing care practice in diverse cultures and subcultures. Emphasis is on nursing within international systems of health care and on nursing practices related to various health-illness systems in this country and worldwide. **May be taken S-N.** *May be offered via interactive television between two sites, with students at both locations.* (Prereq for undergraduate credit, R.N.; for graduate credit, R.N. with baccalaureate degree; cultural anthropology course or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Fall Qtr, ★Sec 1, Th, 4:40-7:40, MoosT 5-125, Gustafson

**Nurs 5780 MULTIDISCIPLINARY PERSPECTIVES ON AGING.** 4 credits, §AdEd 5440, §CPsy 5305, §HSU 5009, §Phar 5009, §PA 5414, §PubH 5737, §SW 5024, §Soc 5960, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Biological, social, psychological aspects of aging; theories of aging; death and bereavement; issues and problems of older adults in America; human services and their delivery systems; public policy and legislation; environments and housing; advocates; retirements. *Students who want graduate credit should register for one of the following: AdEd 5440, CPsy 5305, Nurs 5780, PA 5414, PubH 5737, SW 5024, or Soc 5960. Students who want undergraduate credit should register for Phar 5009 or HSU 5009.* (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with AdEd 5440, CPsy 5305, HSU 5009, Phar 5009, PA 5414, PubH 5737, Soc 5960, and SW 5024. A joint Day/Extension class limited to a combined total of 37 Extension students)

Fall Qtr, ★Sec 1, MW, 4:40-6:25, MoosT 2-690

Spring Qtr, ★Sec 2, MW, 4:40-6:25, MoosT 2-690

**Nurs 5881 THE BIOLOGY OF CANCER.** 3 credits, §GCB 3008, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Biological aspects of etiology, phylogeny, and cellular processes involved in neoplasia. Growth and differentiation of normal and cancer cells. The history of cancer research. (Prereq Biol 1009. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with GCB 3008)

Spring Qtr, Sec 1, W, 6:30-9, BioSci 12, StP Campus, McKinnell

**Nurs 5917 HEALTH CARE FOR CHILDREN AND YOUTH WITH SPECIAL CARE NEEDS.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Children and youth with special health care needs. Growth and development, pathophysiology, specific conditions, and a holistic, family-centered, community-based, culturally competent, coordinated approach to assessment and intervention. **May be taken S-N.** (Prereq #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension students)

Fall Qtr, ★Sec 1, W, 8 a.m.-12:05, HSUnitF, Leonard

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**Nurs 5932 PRIMARY CARE: ASSESSMENT AND MANAGEMENT OF ADULT ELDERLY HEALTH.** 3-5 credits, tuition\* each credit: Resident \$93.50; Non-resident \$271.15; Resident Graduate credit \$118; Non-resident Graduate credit \$259.60; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Advanced practice course focusing on data-based primary care management of common acute and chronic conditions experienced by adult and elderly populations. Clinical reasoning, independent and collaborative practice health care plans are emphasized. **May be taken S-N.** *May be offered via interactive television between two sites, with students at both locations.* (Prereq grad nursing student, Nurs 5810, ¶Nurs 5933, #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Winter Qtr, ★○Sec 1, W, 12:20-5:30, MoosT  
5-125, Burns, Kubik

**Nurs 5941 CARE OF THE ELDERLY I: PHYSIOLOGICAL CONCEPTS.** 2 credits, tuition\*: Resident \$187; Non-resident \$542.30; Resident Graduate credit \$236; Non-resident Graduate credit \$519.20; Resident Graduate School credit \$431; Non-resident Graduate School credit \$948.20.

Exploration of functional patterns related to physiological aspects of aging; examination of research-based interventions used to maintain or restore optional functioning of elderly. **May be taken S-N.** (Prereq for undergraduate credit, R.N.; for graduate credit, R.N. with baccalaureate degree. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Spring Qtr, ★○Sec 1, W, 9:05-11 a.m., HSUnitF,  
Snyder, Camillo

**Nurs 5943 CARE OF THE ELDERLY II: PSYCHOSOCIAL CONCEPTS.** 2 credits, tuition\*: Resident \$187; Non-resident \$542.30; Resident Graduate credit \$236; Non-resident Graduate credit \$519.20; Resident Graduate School credit \$431; Non-resident Graduate School credit \$948.20.

Examination of psychosocial theoretical concepts related to the care of aged persons. Exploration of assessment and research-based interventions with an emphasis on promotion and restoration of health and supportive care. **May be taken S-N.** (Prereq Human Development Across the Life Span course, #; RN for undergraduate credit; RN with baccalaureate degree for graduate credit. Qualified students may register for graduate credit at the University of

Minnesota. A joint Day/Extension class limited to 8 Extension students)

Fall Qtr, ★○Sec 1, W, 2:30-4:25, HSUnitF,  
Ryden

**Nurs 5946 PROFESSIONAL ISSUES IN ADVANCED GERONTOLOGICAL NURSING PRACTICE ROLES.** 2 credits, tuition\*: Resident \$187; Non-resident \$542.30; Resident Graduate credit \$236; Non-resident Graduate credit \$519.20; Resident Graduate School credit \$431; Non-resident Graduate School credit \$948.20.

Examination of professional and policy-related issues common to advanced practice roles including reimbursement, certification, professional relationships, standards of care, legislation, and regulation as they pertain to nurse practitioners, professional practice, the health care system, and the care of older adults. **May be taken S-N.** (Prereq minimum of 6 credits in Gerontological Nursing focus, #; RN for undergraduate credit; RN with baccalaureate degree for graduate credit. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 8 Extension students)

Fall Qtr, ★○Sec 1, W, 4:40-6:35, HSUnitF,  
Feldman

**Nurs 5947 PHARMACOTHERAPEUTICS FOR THE ELDERLY.** 2 credits, tuition\*: Resident \$187; Non-resident \$542.30; Resident Graduate credit \$236; Non-resident Graduate credit \$519.20; Resident Graduate School credit \$431; Non-resident Graduate School credit \$948.20.

Examines pharmacological actions of prescription and over-the-counter medications commonly used by aged persons. A major focus will be the recognition of and interventions for adverse drug effects, side effects, drug incompatibilities, and iatrogenic problems, as well as assessment of drug misuse and/or abuse. Therapeutic dosages for common chronic and acute health problems of the elderly will be examined. **May be taken S-N.** (Prereq for undergraduate credit, R.N.; for graduate credit, R.N. with baccalaureate degree. Students must have written instructor override. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 8 Extension students)

Spring Qtr, ★○Sec 1, Arr, HSUnitF, Camillo

*Registered nurses who wish to continue their studies toward a degree in nursing should contact the School of Nursing Admissions Office, 5-140 UnitF, 308 Harvard St. S.E., University of Minnesota, Minneapolis, MN 55455; (612) 624-3108.*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

### Operations and Management Science (OMS)

(332 Management/Economics: 624-7010)

#### Carlson School of Management

Textbooks for most OMS courses are available at University of Minnesota Bookstore—West Bank (625-3000).

(See also the Management Advancement Program)

John C. Anderson, Associate Professor

Rajiv Banker, Professor

Norm Chervany, Professor

Gretchen Donahue, Adjunct Professor

Steven K. Fahrenholtz, Lecturer

Arthur V. Hill, Professor

Thomas R. Hoffmann, Professor

Charles Hunt, Adjunct Professor, Management Systems, Alliant Techsystems, Inc.

David Kelton, Professor

Inder Khosla, Assistant Professor

John Knauff, Adjunct Professor, Knauff & Associates, Inc.

Abbas Kurawarwala, Assistant Professor

Robin Lawton, International Management Technologies, Inc.

Linda Logan, Team Technologies

James R. Luck, Adjunct Professor, Minnesota Technology, Inc.

Chris Nachtsheim, Professor

Dale Nelson, Adjunct Professor, Partner, Nelson-Anderson Group

John Nicolay, Adjunct Professor, President, Crossroads Management Advisors

Roger G. Schroeder, Professor

Howard Strauss, Senior Executive Fellow and Adjunct Professor

Michael Taaffe, Associate Professor

Lee Wickstrom, Extension Coordinator and Adjunct Professor

**Carlson School of Management degree students must take Operations and Management Science courses A-F.**

**Professional Advancement and Promotion**—Students interested in advancement and promotion in the operations management profession should prepare by taking OMS courses in this order: (1) 1020, (2) 3000, (3) 3041, 3056, 3059, and (4) 3850 or any OMS 5xxx-level course. These courses are required for both the undergraduate emphasis and a proposed certificate in Operations Management, and thus serve as a fundamental prerequisite to a successful professional career in operations or general management.

**OMS 1020 (formerly MSci 1020) DATA ANALYSIS AND STATISTICAL INFERENCE FOR MANAGERS.** 4 credits, §MSci 1020, tuition\* (includes \$16 special fee): Resident \$334; Non-resident \$938.20. (IS)

Introduction to probabilistic and statistical techniques for decision making, including data analysis, sampling, estimation, and hypothesis testing and regression. Using computer software and computer-stored data in statistical analysis. Introduction to modeling and linear programming. (Prereq MSci 1010 or IDSc 1010, Math 1111; Math 1131 recommended. Limited to 45)

Fall Qtr, ★Sec 1, Lect, Th, 5:30-8:15, BlegH 125; Lab, Th, 8:15-9:15, BlegH 125

Winter Qtr, ★Sec 2, T, 5:30-8:15, BlegH 125; Lab, T, 8:15-9:15, BlegH 125

Winter Qtr, ★Sec 3, Th, 5:30-8:15, BlegH 125; Lab, Th, 8:15-9:15, BlegH 125

Spring Qtr, ★Sec 4, T, 5:30-8:15, BlegH 125; Lab, T, 8:15-9:15, BlegH 125

Spring Qtr, ★Sec 5, Th, 5:30-8:15, BlegH 125; Lab, Th, 8:15-9:15, BlegH 125

**OMS 3000 (formerly OM 3000) INTRODUCTION TO OPERATIONS MANAGEMENT.** 4 credits, §OM 3000, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60.

Concepts and principles related to the management of operations functions, including operations strategy, process design, just-in-time, forecasting, inventory management, principles of scheduling, and quality improvement. Taught from a managerial perspective, this course uses examples from service industries, nonprofit organizations, and manufacturing, and stresses the relationships between operations and the environment. (Prereq at least 90 credits completed or in progress. *Open to nondegree students with equivalent experience.* Limited to 50)

Fall Qtr, ★Sec 1, M, 5:30-8:50, BlegH 250, Knauff

Fall Qtr, ★Sec 2, Th, 5:30-8:50, BlegH 235, Knauff

Winter Qtr, ★Sec 3, M, 5:30-8:50, BlegH 140, Wickstrom

Winter Qtr, ★Sec 4, Th, 5:30-8:50, BlegH 250, Wickstrom

Spring Qtr, ★Sec 5, M, 5:30-8:50, BlegH 250, Wickstrom

Spring Qtr, ★Sec 6, Th, 5:30-8:50, BlegH 250, Knauff

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



**OMS 3041 (formerly OM 3041) PROJECT MANAGEMENT.** 4 credits, §OM 3041, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60. (IS)

Principles and methods useful for planning and controlling a project, including development of project plan, resource planning and scheduling, and project monitoring and control. Selected computerized packages are studied, including PERT and CPM, and examples of different types of projects from manufacturing and service industries are used. Open to IT seniors and graduate students in place of CE 5703 or IEOR 5703, Engineering Project Management. **Must be taken A-F.** (Prereq 3000 or OM 3000 and at least 90 credits completed or in progress. *Open to nondegree students with equivalent experience.* Limited to 35)

Spring Qtr, ★Sec 1, Th, 5:30-8:50, BlegH 115, Hunt

**OMS 3056 (formerly OM 3056) PRODUCTION AND INVENTORY MANAGEMENT.** 4 credits, §OM 3056, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60.

Inventory planning, production planning, Materials Requirements Planning (MRP), just-in-time concepts, finite loading systems, distribution systems, forecasting, master scheduling, capacity management, production activity control, and purchasing. Taught from a planning and control systems point of view with managerial orientation. **Must be taken A-F.** (Prereq 3000 or OM 3000 and at least 90 credits completed or in progress. *Open to nondegree students with equivalent experience.* Limited to 35)

Winter Qtr, ★Sec 1, Th, 5:30-8:50, BlegH 330, Hunt

**OMS 3059 (formerly OM 3059) QUALITY MANAGEMENT.** 4 credits, §OM 3059, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60.

Key issues of quality management, including planning and organizing for quality improvement, cost of quality, customer and vendor relations, process control, quality control, management of the improvement process. The course introduces concepts and principles relevant to both service and manufacturing environments, and involves lecture and case instruction. **Must be taken A-F.** (Prereq 3000 or OM 3000 and at least 90 credits completed or in progress. *Open to nondegree students with equivalent experience.* Limited to 35)

Fall Qtr, ★Sec 1, W, 5:30-8:50, AndH 350, Nelson

**OMS 3850 TOPICS IN OMS: BUSINESS LAB TEAM PROJECT.** 4 credits, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60.

Prepares students to lead inter-functional teams solving real-world business problems at the 3M Business Lab using data collected from 3M customers and operations. Topics include project team planning, consensus via story-boarding, team leadership skills, definition of work detail, analysis of findings, development of creative solutions, and presentation of recommendations to 3M with instructor. **Must be taken A-F.** (Prereq 3000, OM 3000 or #. Limited to 45)

Spring Qtr, ★Sec 1, W, 5:30-8:50, BlegH 155, Wickstrom

**OMS 5100 MANUFACTURING FOR COMPETITIVE ADVANTAGE.** 4 credits, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60; Resident Graduate credit \$488; Non-resident Graduate credit \$1054.40; Resident Graduate School credit \$878; Non-resident Graduate School credit \$1912.40.

Overview of the manufacturing function, particularly as manufacturing can contribute to the competitiveness of the firm. Intended primarily for students in engineering and management disciplines. Topics include manufacturing strategy, technology issues, quality issues, and integration of the work force into the effort. The course is affiliated with the Center for the Development of Technological Leadership (CDTL). **Must be taken A-F.** (Prereq 3000 or IEOR 3000 or MBA 8050 or written #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 30)

Winter Qtr, ★Sec 1, T, 5:30-8:50, BlegH 140, Nicolay

**OMS 5155 STATISTICAL METHODS FOR QUALITY AND PRODUCTIVITY IMPROVEMENT.** 4 credits, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60; Resident Graduate credit \$488; Non-resident Graduate credit \$1054.40; Resident Graduate School credit \$878; Non-resident Graduate School credit \$1912.40.

Methods for on-line and off-line quality control. Quality management philosophy, Pareto analysis, control charts, experimental design, and sampling inspection. Applications to administrative service, and production operations. **Must be taken A-F.** (Prereq OMS 1020 or MSci 1020 or #. Qualified students may register for graduate credit at the University of Minnesota. *Open to nondegree students with equivalent experience.* A joint Day/Extension class limited to 7 Extension students)

Spring Qtr, ★Sec 1, Th, 5:30-9, BlegH 335, Fahrenholtz

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

### **OMS 5850 TOPICS IN OMS: INTERNATIONAL OPERATIONS MANAGEMENT, 4**

credits, tuition\* (includes \$16 special fee): Resident \$390; Non-resident \$1100.60; Resident Graduate credit \$488; Non-resident Graduate credit \$1054.40; Resident Graduate School credit \$878; Non-resident Graduate School credit \$1912.40.

Concepts, principles, and techniques for managing international production, assembly, support, and service operations. Emphasizes a management perspective and decision-making for global operations. While quantitative and behavioral techniques are taught, emphasis is on using these to solve current and emerging international management problems. **Must be taken A-F.** (Prereq OMS 3000 or written #. Qualified students may register for graduate credit at the University of Minnesota. *Open to nondegree students with equivalent experience.* A joint Day/Extension class limited to 12 Extension students)

Fall Qtr, ★●Sec 1, M, 5:30-8:50, AndH 210, Wickstrom

### **APEX (Academy Practitioner Exchange) Project**

**APEX PROJECT COURSES.** 4 credits (may be repeated for credit). Tuition\* (includes \$450 special fee): Resident \$824; Non-resident \$1534.60; Resident Graduate credit \$922; Non-resident Graduate credit \$1488.40; Resident Graduate School credit \$1312; Non-resident Graduate School credit \$2346.40.

A special program designed to provide a productive interaction between faculty and practitioners who are interested in developing the frontiers of knowledge and practice. Opportunity to study special topics in operations and management science in depth. Participative inquiry formats address current interests. Designed to sharpen concept and practice. Interaction with faculty, practitioners, and resource person in team settings. (Prereq minimum of two years of managerial experience. Qualified students may register for graduate credit at the University of Minnesota.) The course is offered on Thursday evenings each quarter from 5:30-8:30.

**For further information about courses listed below and registration information, contact the course coordinator at (612) 624-7558.**

### **OMS 5998 BUSINESS PROCESS RE-ENGINEERING.**

Many of our current systems resulted from automating existing forms and old procedures. Some were developed as long as 20 to 30 years ago to reflect the then-popular over-control or to support individual functions only. Our business needs have changed and we have outgrown these legacy systems which do not support the competitive needs of our corporations. Today's needs are for a system that supports a new enterprise vision which uses time-based management, activity-based costing, and TQM. Students learn how to develop a vision, benchmark operations, gain consensus, map processes, eliminate bottlenecks and non-value-added activities, resequence significant steps, allocate work to person or computer, and how to interface with a CASE (Computer-Aided Software Engineering) system. Participants may bring actual problems to be solved by seminar teams under facilitator guidance. (Limited to 15)

Fall Qtr, ★Sec 1, Th, 5:30-8:50, Law 3, Wickstrom

### **OMS 5998 STRATEGIC QUALITY LEADERSHIP: THE NEXT WAVE.**

The quality movement has traditionally focused on process improvement, using a manufacturing model. The next wave of quality leadership shifts the focus to product design, customer expectations, and continuous innovation for those of us who don't personally make widgets. This course teaches and provides a unique quality management system for organizations which provide internally or externally directed service. Students learn a new way of thinking about quality and leadership, which is both stimulating and enlightening. These new concepts, tools, and strategy are specifically designed for the information and service age of the 21st century. The new knowledge is so compelling and intuitively appealing, students will learn how some leaders are getting significantly improved business performance. Participants will learn to define knowledge/service work as tangible products; differentiate three customer roles; identify customer expectations; develop and apply measures to knowledge/service work; reduce process times by 80%; and transform the organization's culture. This course provides a new way of thinking about leadership, quality, and innovation as used by Baldrige Award winners such as Motorola and AT&T, and is sponsored by the University's Quality Leadership Center. (Limited to 15)

Winter Qtr, ★Sec 2, Th, 5:30-8:50, Law 1, Lawton, Logan

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**OMS 5998 SEMINAR: BETTER PRODUCTS TO MARKET SOONER.**

How to reduce the time normally needed to develop a new product. The steps in the new product introduction cycle are defined and organized into logical phases. Ideas and approaches of concurrent and simultaneous engineering are explained, evaluated, and implemented. The approach uses cross-functional teamwork. The team may have a mix of market specialists, product planners, design analysts, process/manufacturing engineers, tooling designers, and other specialists as required in certain businesses. The facilitator will emphasize design for manufacturability and design for assembly. Participants may bring actual problems to class. Class will work out when the optimal time is to start-and-stop development. The objective is to get to the market first or sooner. Typical participant in this seminar should have an undergraduate engineering degree and might be working on or managing a design-to-production transition team. (Limited to 15)

Spring Qtr, ★Sec 3, Th, 5:30-8:50, Law 3, Luck  
*APEX Project orientation sessions are conducted regularly to acquaint participants with the scope and practice. Prospective participants should contact the APEX Project coordinator for further details on orientation sessions and APEX Project courses: (612) 624-7558.*

**Ophthalmology**

(Your attention is called to the Ophthalmology Technician Certificate in the Degrees and Certificates section of this Bulletin)

**Persian**

See Area Studies Programs, and the Institute of Languages and Literatures

**Pharmaceutics (Phmc)**

(9-177 Health Sciences Unit F: 624-5151)

**College of Pharmacy**

Textbooks for most Phmc courses are available at University of Minnesota Bookstore—Health Sciences (625-8600).

*No courses offered through Extension Classes 1995-96*

**Pharmacognosy (Phcg)**

(5-110 Health Sciences Unit F: 624-9490)

**College of Pharmacy**

Textbooks for most Phcg courses are available at University of Minnesota Bookstore—Health Sciences (625-8600).

John Staba, Professor of Pharmacognosy

**Phcg 1800 NATURE'S REMEDIES.** 3 credits, tuition\* (includes \$10 special fee): Resident \$248.50; Non-resident \$701.65.

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. Herbal tea discussions. **Must be taken S-N.** (No prereq. Limited to 25)

Spring Qtr, ★Sec 1, T, 6:20-8:50, HSUnitF  
7-193, Staba

(See also CSch 0539, Spices, Herbs, and Medicinal Plants)

**Pharmacy Practice (Phar)**

(5-110 Health Sciences Unit F: 624-9490)

**College of Pharmacy**

Textbooks for most Phar courses are available at University of Minnesota Bookstore—Health Sciences (625-8600).

(See also REX 0608, Orphan Medical: An Introduction to Pharmaceutical Marketing)

Thomas M. McKennell, Assistant Professor and Director of Pharmacy Continuing Education

**Phar 5007 BIOLOGY OF AGING.** 2 credits, §SAPh 5007, §HSU 5031, tuition\*: Resident \$343; Non-resident \$754.60.

Biological theories of aging are reviewed; biological changes associated with aging in organ and sensory systems are studied. Other topics examined are the nutritional needs of the elderly, and their use of medications. Physical changes due to normal aging are contrasted with those having a pathological base. (No prereq. Students who wish to take this course for undergraduate credit should register for either Phar 5007 or HSU 5031. Students who wish to take this course for graduate credit should register for SAPH 5007. Meets concurrently with HSU 5031 and SAPH 5007. A joint Day/Extension class)

Winter Qtr, ●Sec 1, Th, 4:40-6:25, MoosT 5125, McKennell

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Phar 5009 MULTIDISCIPLINARY PERSPECTIVES ON AGING.** 4 credits, §AdEd 5440, §CPsy 5305, §HSU 5009, §Nurs 5780, §PA 5414, §PubH 5737, §SW 5024, §Soc 5960, tuition\*: Resident \$686; Non-resident \$1509.20.

Biological, social, psychological aspects of aging; theories of aging; death and bereavement; issues and problems of older adults in America; human services and their delivery systems; public policy and legislation; environments and housing; advocates; retirements. *Students who want graduate credit should register for one of the following: AdEd 5440, CPsy 5305, Nurs 5780, PA 5414, PubH 5737, SW 5024, or Soc 5960. Students who want undergraduate credit should register for Phar 5009 or HSU 5009.* (No prereq. Phar 5009 may not be taken for graduate credit. Meets concurrently with AdEd 5440, CPsy 5305, HSU 5009, Nurs 5780, PA 5414, PubH 5737, SW 5024, and Soc 5960. A joint Day/Extension class)

Fall Qtr, ●Sec 1, MW, 4:40-6:25, MoosT 2-690  
(Limited to a combined total of 42 Extension students)

Spring Qtr. ●Sec 2, MW, 4:40-6:25, MoosT 2-690

**Phar 5210 TERMINOLOGY OF THE HEALTH SCIENCES.** 2 credits, §HSU 5210, tuition\*: Resident \$343; Non-resident \$754.60.

A self-study course that has been designed to provide students with a working knowledge of the terminology utilized in the health sciences. There are no formal class sessions. Students take four tests during the term and the schedule for these is provided at the beginning of each term, when orientation sessions are held. For information, call 624-2442 before the first day of the term, or go to room 5-120 HSUnitF during regular office hours. (No prereq. May not be taken for graduate credit. Meets concurrently with HSU 5210. A joint Day/Extension class)

Fall Qtr, ●Sec 1, Arr, McKennell

Winter Qtr, ●Sec 2, Arr, McKennell

Spring Qtr, ●Sec 3, Arr, McKennell

**Pharmacy, Continuing Education in**—For information about continuing education programs in Pharmacy, please contact the Office of Continuing Education in Pharmacy, University of Minnesota, 308 Harvard Street S.E., 5-120 Health Sciences Unit F, Minneapolis, MN 55455. Telephone (612) 624-2442.

## Philosophy (Phil)

(355 Ford Hall: 625-6563)

### College of Liberal Arts

Textbooks for most Phil courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

(See also English; Humanities; and Interdepartmental Study)

Keith Gunderson, Professor  
William H. Hanson, Professor  
Michael Kac, Professor  
Douglas E. Lewis, Professor  
Joseph Owens, Associate Professor  
C. Wade Savage, Professor  
C. Kenneth Waters, Associate Professor

### 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 adviser (625-2500).

### B.A. Major Sequence

A coherent major program signed by an adviser (samples of coherent major programs are available from the Director of Undergraduate Studies)

Phil 1001 or 3201, or 5201, Logic

Phil 3001 and Phil 3003, History of Philosophy

Phil 3105 or 3601 or 5105 or 5601, Epistemology

Phil 3311 or 5311 or 5312 or 5321 or 5415, Ethics

A major project (for further information consult the Director of Undergraduate Studies—625-6563)

A total of eleven 4- or 5-credit philosophy courses, at most two of which are at the 1xxx level, at least three of which are at the 5xxx level, at least four of which are courses completed at the University of Minnesota, and all of which have grades of C or higher (exception: 2 courses may have grades of S). The courses in the list above count toward the total of eleven.

### Minor Sequence

### Minor Requirements

Minimum of 20 3000-5000 cr in philosophy. Course selections must be approved by a philosophy faculty adviser. For further information consult the Director of Undergraduate Studies (625-6563).

(Consult the department for possible changes in major or minor sequences)

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

\* Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

*Students interested in the major or minor should call CEE Counseling for advising assistance (625-2500).*

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Philosophy. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**Continuing Education for Women (CEW) sections available in the following courses:** Phil 1003

**Phil 1001 LOGIC.** 5 credits, tuition\*: Resident \$397.50; Non-resident \$1152.75. (IS)

Application of formal techniques for evaluating arguments. (No prereq. Limited to 45)

Fall Qtr, ★Sec 1, M, 6:20-8:50, FordH 55

Fall Qtr, ★Sec 2, W, 6:20-8:50, FordH 155

Fall Qtr, ★Sec 3, T, 6:20-8:50, FordH 155

Winter Qtr, ★Sec 4, W, 6:20-8:50, Richfield HS 143 (Limit 30)

Winter Qtr, ★Sec 5, T, 6:20-8:50, FordH 55

Winter Qtr, ★Sec 6, Th, 6:20-8:50, FordH 155

Spring Qtr, ★Sec 7, M, 6:20-8:50, FordH 155

Spring Qtr, ★Sec 8, W, 6:20-8:50, FordH 155

**Phil 1002 INTRODUCTION TO PHILOSOPHY.** 5 credits, tuition\*: Resident \$397.50; Non-resident \$1152.75. (IS)

Problems, principal methods and schools of philosophy; historical and contemporary views. (No prereq)

Fall Qtr, Sec 1, W, 6:20-8:50, FordH 349

Fall Qtr, Sec 2, Th, 6:20-8:50, FordH 60

Winter Qtr, Sec 3, M, 6:20-8:50, FordH 40

Winter Qtr, Sec 4, W, 6:20-8:50, FordH 150

Spring Qtr, Sec 5, T, 6:20-8:50, FordH 130

**Phil 1003 ETHICS.** 5 credits, tuition\*: Resident \$397.50; Non-resident \$1152.75. (IS)

Problems that arise when human beings attempt to think systematically about conduct and value. (No prereq)

Fall Qtr, Sec 1, M, 1-3:30, MacP. Offered through Continuing Education for Women

Fall Qtr, Sec 2, T, 6:20-8:50, FordH 150

Winter Qtr, Sec 3, T, 6:20-8:50, FordH 150

Spring Qtr, Sec 4, Th, 6:20-8:50, FordH 150

(See also CSch 0390, Whose Body Is It, Anyway? Ethics in Medicine)

**Phil 3003 GENERAL HISTORY OF WESTERN PHILOSOPHY.** 5 credits, tuition\*: Resident \$430; Non-resident \$1247.

Survey of major developments in Western philosophical thought: Modern philosophy from Descartes through Hume. (No prereq)

Fall Qtr, Sec 1, W, 5:20-7:50, FordH 160, Lewis

**Phil 3004 GENERAL HISTORY OF WESTERN PHILOSOPHY.** 5 credits, tuition\*: Resident \$385; Non-resident \$1247.

Later modern philosophy from Kant through 19th century. (No prereq)

Winter Qtr, Sec 1, T, 6:20-8:50, AmundH 104, Gunderson

**Phil 3105 INTRODUCTION TO THE THEORY OF KNOWLEDGE.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Theories and problems concerning evidence, belief, and knowledge. (Prereq 1001 or #)

Winter Qtr, Sec 1, M, 6:20-8:50, FordH 170, Savage

**Phil 3231 INTRODUCTION TO THE PHILOSOPHY OF LANGUAGE.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Elementary issues concerning the nature of reference, linguistic convention, linguistic truth, translation, synonymy or the relation between language and thought. (Prereq 1001 or #)

Spring Qtr, Sec 1, T, 6:20-8:50, FordH 175, Kac

**Phil 3601 SCIENTIFIC THOUGHT.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Problems in the philosophy of science through the reading of historical and contemporary sources describing major scientific achievements and controversies. (Prereq 1002, two natural science courses or completion of Group B distribution requirement)

Spring Qtr, Sec 1, M, 6:20-8:50, FordH 130, Waters

**Phil 3607 PHILOSOPHY OF PSYCHOLOGY.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Major theories of mind, including the "invention" of the mind by Descartes, classical empiricism, the impact of Darwinism, Freud's theories, Gestalt psychology, behaviorism, Chomsky's rationalism, contemporary functionalism, the computer model. (Prereq one course in philosophy or psychology or #)

Fall Qtr, Sec 1, Th, 6:20-8:50, FordH 285, Owens

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Phil 5201 SYMBOLIC LOGIC I.** 5 credits, tuition\*: Resident \$430; Non-resident \$1247; Resident Graduate credit \$590; Non-resident Graduate credit \$1298; Resident Graduate School credit \$1077.50; Non-resident Graduate School credit \$2370.50.

Development of a formalized language. Syntax and semantics of sentential and first-order logic. Deductive systems. (Prereq 1001 or #. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr, Sec 1, W, 6:20-8:50, FordH 130, Hanson

**Phil 5615 MINDS, BODIES, AND MACHINES.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Philosophical relevance of cybernetics, artificial intelligence, and computer simulation. (Prereq 4 cr in philosophy or #. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr, Sec 1, W, 6:20-8:50, FordH 70,

Owens

### Photography

See Art; Art History; General College; and Compleat Scholar noncredit courses

### Physical Education (PE)

(224 Cooke Hall: 625-5300)

**College of Education and Human Development**  
(School of Kinesiology and Leisure Studies)

Textbooks for most PE courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

Paul Abdella, Teaching Specialist

(See also Dance; Kinesiology; Recreation; and Practical Scholar noncredit courses)

*Courses listed below are ranked numerically according to activity level, i.e., the level or skill required. The activity level of each course is indicated by the second digit in the course number, 0=first level, 1=second level, and so on. Thus 1007, for example, is a first-level course and 1107 is a second-level course. In most cases, the lower level course is a prerequisite for the higher; however, students who can demonstrate sufficient skill in an activity may usually register for the most advanced course without completing the prerequisite(s).*

*Most of the courses are considered high intensity, that is, they require a high level of physical exertion. Thus students are encouraged to consider carefully any limits on their health or physical fitness and to consult a physician if they have any questions about their health or about their ability to participate safely in the physical activities involved in any course for which they wish to register.*

**Students who do not attend the first and/or second meeting of a class forfeit their place. If a class is closed at the time of registration, a student may report to the first class meeting to ask about possible cancellations.**

**Sports Management**—The School of Kinesiology and Leisure Studies offers a certificate in Sports Management through Continuing Education and Extension/University College. For information, call (612) 625-5300.

**Coaching Licensure**—Beginning Fall 1993, all courses necessary for the Minnesota State Coaching Licensure will be offered through Continuing Education and Extension/University College and the summer session over a two-year period. For information, call (612) 625-5300.

**Physical activity courses (numbered through 1499) may be taken S-N. Those numbered 1500 and above may not be taken S-N by Education students.**

**PE 1007 SWIMMING.** 1 credit, tuition\*: Resident \$79.50; Non-resident \$230.55.

Designed for the beginner including aquatic breathing, floating, treading water, finning, human stroke, elementary backstroke, sidestroke, front crawl. (Prereq non-swimmer. Limited to 22)

Fall Qtr, ★ Sec 1, MW, 6:10-7:10, CookeH 10

Winter Qtr, ★ Sec 2, MW, 6:10-7:10, CookeH 10

Spring Qtr, ★ Sec 3, MW, 6:10-7:10, CookeH 10

**PE 1014 CONDITIONING.** 1 credit, tuition\*: Resident \$79.50; Non-resident \$230.55.

Improvement of physical fitness and general appearance through the use of running, circuit training, and progressive exercises. (No prereq. Limited to 40)

Fall Qtr, ★ Sec 1, W, 6-8, FieldHse

Winter Qtr, ★ Sec 2, T, 6-8, FieldHse

Spring Qtr, ★ Sec 3, T, 6-8, FieldHse

Spring Qtr, ★ Sec 4, Th, 6-8, FieldHse

(See also PSch 0948, Fitness for a Lifetime)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**PE 1015 WEIGHT TRAINING.** 1 credit, tuition\*: Resident \$79.50; Non-resident \$230.55.

Fundamentals including techniques, theory, and individualized exercise prescription. (No prereq. Limited to 30)

Fall Qtr, ★ Sec 1, T, 8-10, URecCtr

Fall Qtr, ★ Sec 2, T, 8-10, URecCtr

Winter Qtr, ★ Sec 3, T, 8-10, URecCtr

Winter Qtr, ★ Sec 4, T, 8-10, URecCtr

Spring Qtr, ★ Sec 5, T, 8-10, URecCtr

Spring Qtr, ★ Sec 6, T, 8-10, URecCtr

(See also PSch 0949, Fitness for the Advanced Exerciser: Making Knowledgeable Choices)

**PE 1029 HANDBALL.** 1 credit, tuition\*: Resident \$79.50; Non-resident \$230.55.

Basic fundamentals of skills and shots; rules and game strategy. (No prereq. Limited to 22)

Winter Qtr, ★ Sec 1, T, 8-10, URecCtr

**PE 1033 FOIL FENCING.** 1 credit, tuition\*: Resident \$79.50; Non-resident \$230.55.

Developing necessary physical and perceptual skills. Includes history, rules, and practical bouting experience. (No prereq. Limited to 28)

Fall Qtr, ★ Sec 1, W, 6-8, CookeH 308

**PE 1035 KARATE.** 1 credit, tuition\*: Resident \$79.50; Non-resident \$230.55.

Emphasis on learning basic stances, blocks, and attacks; hand and foot techniques. (No prereq. Students should be aware they will be asked to pay a facilities fee. Consult the instructor at the first class meeting. Limited to 40)

Fall Qtr, ★ Sec 1, T, 6-8, U-Tech Bldg, Fusaro

Winter Qtr, ★ Sec 2, T, 6-8, U-Tech Bldg, Fusaro

**PE 1036 RACQUETBALL.** 1 credit, tuition\*: Resident \$79.50; Non-resident \$230.55.

Fundamentals of skills and shots; rules and game strategy. (No prereq. Limited to 22)

Fall Qtr, ★ Sec 1, Sa, 9-11, URecCtr

Winter Qtr, ★ Sec 2, Sa, 9-11, URecCtr

Spring Qtr, ★ Sec 3, Sa, 9-11, URecCtr

**PE 1041 CYCLING.** 1 credit, tuition\*: Resident \$79.50; Non-resident \$230.55.

Basic skills; physiological and mechanical principles; maintenance, safety, training. Supply own bicycle. (No prereq. Limited to 25)

Spring Spec Term, ★Sec 1, Sa, 9 a.m.-12, Apr.

13-May 18, CookeH 215. *No late fee through Apr. 5*

**PE 1044 SELF-DEFENSE.** 1 credit, tuition\*: Resident \$79.50; Non-resident \$230.55.

Fundamental skills; development of the basic skills and techniques, values derived from active participation in physical activity. (No prereq. Limited to 35)

Fall Qtr, ★ Sec 1, W, 6-8, Gym (StP), StP Campus

Winter Qtr, ★ Sec 2, W, 6-8, Gym (StP), StP Campus

Spring Qtr, ★ Sec 3, W, 6-8, Gym (StP), StP Campus

**PE 1050 GOLF.** 1 credit, tuition\*: Resident \$79.50; Non-resident \$230.55.

Fundamentals of grip, stance, and swing in addition to etiquette and rules; moderate intensity. (No prereq. Limited to 20)

Spring Qtr, ★ Sec 1 M, 5:45-7:15, Club House, Golf Course

Spring Qtr, ★ Sec 2, T, 5:45-7:15, Club House, Golf Course

Spring Qtr, ★ Sec 3, W, 5:45-7:15, Club House, Golf Course

Spring Qtr, ★ Sec 4, Th, 5:45-7:15, St. Paul Gym, Golf Course

**PE 1056 NORDIC (CROSS COUNTRY) SKIING.** 1 credit, tuition\*: Resident \$79.50; Non-resident \$230.55.

Basic techniques; participation in an exercise and conditioning program preparatory to skiing. Students supply own skis. (No prereq. Limited to 30)

Winter Spec Term, ★ Sec 1 Sa, 9 a.m.-12,

Jan. 6-Feb. 10, Gym Classroom, StP Campus

Winter Spec Term, ★Sec 2, Sa, 1-4, Jan. 6-Feb. 10, Gym Classroom, StP Campus

**PE 1074 VOLLEYBALL.** 1 credit, tuition\*: Resident \$79.50; Non-resident \$230.55.

Fundamental skills and rules of volleyball; basic team play and strategy. (No prereq. Limited to 26)

Fall Qtr, ★ Sec 1, M, 6-8, CookeH 325

Winter Qtr, ★ Sec 2, M, 6-8, CookeH 325

Spring Qtr, ★ Sec 3, M, 6-8, CookeH 325

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**PE 1110 DANCE TOPICS: T'AI CHI CH'UAN.** 1 credit, tuition\* (includes \$30 special fee): Resident \$109.50; Non-resident \$260.55.

A slow-motion exercise which works out the complete muscular and nervous system as well as benefiting the internal organs. The gentle movements calm the mind and breath as well as unifying the body into one unit. This class will include some Daoist warm-up exercises, Ch'i-Kung breathing exercises, and an introduction to the formal T'ai Chi movements. (No prereq. Meets concurrently with Dnce 1110 sec 10. Limited to a combined total of 20)

Spring Qtr, ★Sec 1, MW, 7-8:30, NorrisH 67, Abdella

**PE 1205 SCUBA AND SKIN DIVING.** 1 credit, tuition\*: Resident \$79.50; Non-resident \$230.55. Classroom and pool instruction for entry-level scuba training. Internationally recognized certification available through the instructor, but not part of the course. Limited to 26)

Fall Qtr, ★ Sec 1, M, 6-8, Wet Classroom, UAqCtr; M, 8-10, Divewell, UAqCtr

Winter Qtr, ★ Sec 2, M, 6-8, Wet Classroom, UAqCtr; M, 8-10, Divewell, UAqCtr

Spring Qtr, ★ Sec 3, M, 6-8, Wet Classroom, UAqCtr; M, 8-10, Divewell, UAqCtr

### Physical Medicine and Rehabilitation (PMed)

(860 Mayo: 626-4050)

#### Medical School

Textbooks for most PMed courses are available at University of Minnesota Bookstore—Health Sciences (625-8600).

Diane R. Anderson, Assistant Clinical Specialist

Rick DiFabio, Associate Professor

Corinne T. Ellingham, Associate Professor

Maymie J. Eschwey, Lecturer, School of Public Health

Robert P. Patterson, Professor

Laura Pizer, Clinical Instructor, Physical Medicine and Rehabilitation

Glenn Scudder, Associate Professor

LaDora Thompson, Assistant Professor

(See also Cell Biology and Neuroanatomy; and General College courses)

**PMed 1002 ORIENTATION TO PHYSICAL THERAPY.** 1 credit, tuition\*: Resident \$79.50; Non-resident \$230.55.

Overview of the profession through lectures, demonstrations, films, and tours. Provides factual information and guidance for students planning to enter professional training in physical therapy. **Must be taken S-N. Offered alternate years.** (No prereq. Limited to 50)

Spring Qtr, ★Sec 1, Th, 4:40-5:45, ChRC 220

**PMed 1003 ORIENTATION TO OCCUPATIONAL THERAPY.** 1 credit, tuition\*: Resident \$79.50; Non-resident \$230.55.

Survey of the profession through lectures, films, demonstrations, and tours. For students investigating the field of occupational therapy. **Must be taken S-N.** (No prereq. Limited to 75)

Winter Qtr, ★Sec 1, W, 4:40-5:30, ChRC 208, Anderson

**PMed 5135 PATHOKINESIOLOGY.** 3 credits, tuition\*: Resident \$450; Non-resident \$990; Resident Graduate credit \$450; Non-resident Graduate credit \$990; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Lecture course materials and laboratory experiences are designed to develop an understanding of normal and abnormal body movement patterns and capabilities. **Must be taken A-F. Offered alternate years.** (Prereq #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, ○Sec 1, Arr

**PMed 5150 KINESIOLOGICAL ELECTROMYOGRAPHY AND NERVE CONDUCTION.** 3 credits, tuition\*: Resident \$450; Non-resident \$990; Resident Graduate credit \$450; Non-resident Graduate credit \$990; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

A lecture and a laboratory format course designed to develop understanding and skill in the use of electromyography and nerve conduction for evaluating movement. (Prereq #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, ○Sec 1, Arr

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



**PMed 5294 INDEPENDENT STUDY IN PHYSICAL THERAPY.** Credit arr, tuition\* each credit: Resident \$150; Non-resident \$330; Resident Graduate credit \$150; Non-resident Graduate credit \$330; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Independent reading, and formal and informal discussions on a specific topic, for example, outcome assessment or examining theoretical bases for a particular patient prescription. **Must be taken S-N.** (Prereq # or registered physical therapy student. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, ●Sec 1, Arr  
Winter Qtr, ●Sec 2, Arr  
Spring Qtr, ●Sec 3, Arr

**PMed 5296 PEDIATRIC EVALUATION AND TREATMENT PLANNING.** 1 credit, \$HSU 5297, tuition\*: Resident \$150; Non-resident \$330; Resident Graduate credit \$150; Non-resident Graduate credit \$330; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Pediatric evaluation and treatment planning. **Must be taken S-N.** (Prereq rehab, health or community professional qualified students, or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 20 Extension students)

Spring Qtr, ★●Sec 1, Arr, Ellingham

**PMed 5297 REHABILITATION: AN INTERNATIONAL PERSPECTIVE.** 3 credits, \$HSU 5297, tuition\*: Resident \$450; Non-resident \$990; Resident Graduate credit \$450; Non-resident Graduate credit \$990; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Explores physical medicine and rehabilitation as well as prevention issues abroad. The seminar format focuses on cultural factors which influence health and health services. **Must be taken S-N.** (Prereq rehab, health or community professional qualified students, or #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with HSU 5297. Limited to a combined total of 20)

Spring Qtr, ★Sec 1, W, 4:45-7:30, ChRC 208, Ellingham, Eschwey, Pizer

**PMed 5810 ASSESSMENT OF THE ELDERLY.** 3 credits, tuition\*: Resident \$450; Non-resident \$990; Resident Graduate credit \$450; Non-resident Graduate credit \$990; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Lectures, course materials, and on-site experiences are designed to develop understanding and skill in developing and using cardiopulmonary endurance, strength, activities of daily living, and perceptual assessment techniques. Arranged experiences at high-rise apartments for the elderly and handicapped. (Prereq #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr, ●Sec 1, Arr

**PMed 5814 PHYSIOLOGICAL ASSESSMENT IN PHYSICAL THERAPY.** 3 credits. Offered alternate years. Tentatively scheduled for fall 1996.

**PMed 5817 SPECIAL TOPICS IN PHYSICAL THERAPY.** 1-3 credits, tuition\* each credit: Resident \$150; Non-resident \$330; Resident Graduate credit \$150; Non-resident Graduate credit \$330; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Individual study in areas related to physical therapy. Call (612) 626-4973 for information. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, ●Sec 1, Arr, DiFabio  
Winter Qtr, ●Sec 2, Arr, DiFabio  
Spring Qtr, ●Sec 3, Arr, DiFabio

**PMed 5841 INSTRUMENTATION AND ANALYSIS TECHNIQUES.** 3 credits, tuition\*: Resident \$450; Non-resident \$990; Resident Graduate credit \$450; Non-resident Graduate credit \$990; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Lectures and course materials are designed to develop an understanding of instrumentation, scientific principles, and analytical methods used for rehabilitation research and therapies. (Prereq Phys 1031, 1032 or equivalent. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr, ●Sec 1, TTh, 4:40-6:10, ChRC R208, Patterson

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

### Physics (Phys)

(148 Physics: 624-7375)

#### Institute of Technology

Textbooks for most Phys courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

(See also Interdepartmental Study; and *Natural and Physical Sciences* in Compleat Scholar noncredit section)

**Changes in Physics Offerings—NOTE:** Registration in a section of Phys 1041-1042 or a section of Phys 1251-1252-1253 automatically places a student in a lecture, recitation, and a laboratory for the course. Labs which were formerly separate course offerings are now included with the lecture portion of the courses.

**Computer Labs—**Students enrolling in Phys 1041-42, 1251, 1252, and 1253 may be required to pay an additional fee for access to the computer lab.

**Phys 1041-1042 INTRODUCTORY PHYSICS.** 5 credits each quarter, tuition\* each quarter: Resident \$397.50; Non-resident \$1152.75. (IS)

Lectures, recitation, and lab sessions. Primarily for students interested in topics useful in technical areas. The fundamental principles of physics in the context of the everyday world. The use of kinematics, dynamics, and conservation principles with quantitative and qualitative problem solving techniques to understand phenomena of mechanics, electromagnetism and the structure of matter. (Prereq high school algebra and geometry for 1041; 1041 for 1042; trigonometry recommended. Lectures for sec 1041 meet concurrently; lectures for sec 1042 meet concurrently. Limited to 15)

Winter Qtr, 1041, ★Sec 1, Lect, TTh, 5:45-7:35, Phys 170; Rec, Th, 7:45-8:35, Phys 143; Lab, T, 7:45-9:35, Phys

Winter Qtr, 1041, ★Sec 2, Lect, TTh, 5:45-7:35, Phys 170; Rec, Th, 7:45-8:35, Phys 157; Lab, W, 5:45-7:35, Phys

Winter Qtr, 1041, ★Sec 3, Lect, TTh, 5:45-7:35, Phys 170; Rec, F, 7:45-8:35, Phys 143; Lab, F, 5:45-7:35, Phys

Winter Qtr, 1041, ★Sec 4, Lect, TTh, 5:45-7:35, Phys 170; Rec, Sa, 10:10-11 a.m., Phys 157; Lab, Sa, 11:10 a.m.-1, Phys

Spring Qtr, 1042, ★Sec 1, Lect, TTh, 5:45-7:35, Phys 133; Rec, Th, 7:45-8:35, Phys 143; Lab, T, 7:45-9:35, Phys

Spring Qtr, 1042, ★Sec 2, Lect, TTh, 5:45-7:35, Phys 133; Rec, Th, 7:45-8:35, Phys 157; Lab, W, 5:45-7:35, Phys

Spring Qtr, 1042, ★Sec 3, Lect, TTh, 5:45-7:35,

Phys 133; Rec, F, 7:45-8:35, Phys 143; Lab, F, 5:45-7:35, Phys

Spring Qtr, 1042, ★Sec 4, Lect, TTh, 5:45-7:35, Phys 133; Rec, Sa, 10:10-11 a.m., Phys 157; Lab, Sa, 11:10 a.m.-1, Phys

**Phys 1251, 1252, 1253 GENERAL PHYSICS I-II-III.** 4 credits each quarter, §1451H-1452H-1453H-1454H, tuition\* each quarter: Resident \$318; Non-resident \$922.20.

Calculus-level general physics course stressing the use of fundamental principles to solve quantitative problems. Description of motion, forces, conservation principles, fields, probability, and the structure of matter. 1251: Mechanics. 1252: Mechanics, thermal and statistical physics. 1253: Electricity and magnetism. (Prereq Math 1251 or ¶Math 1251 for 1251, Math 1252 or ¶Math 1252 for 1252, Math 1261 or ¶Math 1261 for 1253. Lectures meet concurrently. Limited to 15)

Fall Qtr, 1251, ★Sec 1, Lect, MW, 5:45-7:35, Phys 170; Rec, M, 7:45-8:35, Phys 236a; Lab, W, 7:45-9:35, Phys

Fall Qtr, 1251, ★Sec 2, Lect, MW, 5:45-7:35, Phys 170; Rec, W, 7:45-8:35, Phys 143; Lab, T, 6:45-8:35, Phys

Fall Qtr, 1251, ★Sec 3, Lect, MW, 5:45-7:35, Phys 170; Rec, M, 7:45-8:35, Phys 157; Lab, W, 7:45-9:35, Phys

Fall Qtr, 1251, ★Sec 4, Lect, MW, 5:45-7:35, Phys 170; Rec, M, 7:45-8:35, Phys 143; Lab, Sa, 8-9:50 a.m., Phys

Winter Qtr, 1252, ★Sec 1, Lect, MW, 5:45-7:35, Phys 170; Rec, M, 7:45-8:35, Phys 157; Lab, W, 7:45-9:35, Phys

Winter Qtr, 1252, ★Sec 2, Lect, MW, 5:45-7:35, Phys 170; Rec, W, 7:45-8:35, Phys 236a; Lab, T, 6:45-8:35, Phys

Winter Qtr, 1252, ★Sec 3, Lect, MW, 5:45-7:35, Phys 170; Rec, M, 7:45-8:35, Phys 236a; Lab, W, 7:45-9:35, Phys

Winter Qtr, 1252, ★Sec 4, Lect, MW, 5:45-7:35, Phys 170; Rec, M, 7:45-8:35, Phys 143; Lab, Sa, 8-9:50 a.m., Phys

Spring Qtr, 1253, ★Sec 1, Lect, MW, 5:45-7:35, Phys 170; Rec, M, 7:45-8:35, Phys 143; Lab, W, 7:45-9:35, Phys

Spring Qtr, 1253, ★Sec 2, Lect, MW, 5:45-7:35, Phys 170; Rec, W, 7:45-8:35, Phys 143; Lab, T, 6:45-8:35, Phys

Spring Qtr, 1253, ★Sec 3, Lect, MW, 5:45-7:35, Phys 170; Rec, M, 7:45-8:35, Phys 157; Lab, W, 7:45-9:35, Phys

Spring Qtr, 1253, ★Sec 4, Lect, MW, 5:45-7:35, Phys 170; Rec, M, 7:45-8:35, Phys 236a; Lab, Sa, 8-9:50 a.m., Phys

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**Phys 3501 MODERN PHYSICS.** 4 credits (no cr for physics majors), §3512-3513, tuition\*: Resident \$374; Non-resident \$1084.60. (IS)

Thermal and statistical physics concepts; elementary quantum mechanics with examples from atomic and molecular structure, and solid-state physics. (Prereq 1253 or 1453, Chem 1052, Math 3261)  
Fall Qtr, Sec 1, TTh, 5-6:50, Phys 170

(See also CSch 0560, Quarks to Quasars: An Overview of 20th-Century Physics)

**Phys 5940 PHYSICS FOR HIGH SCHOOL TEACHERS: EXPERIMENTAL FOUNDATIONS AND HISTORICAL PERSPECTIVES.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

An in-depth examination of a conceptual theme in physics and its experimental foundations and historical perspectives. Typical themes are kinematics and dynamics from Aristotle through Einstein; the nature of charge; the nature of light; energy and thermodynamics; electricity, magnetism, and quantized fields; the structure of matter. This is a course aimed at teachers of physics and physical sciences. Designed to improve teachers' understanding of physics and show how the history of science can bring more activity and fun into teaching electricity. By following the development of ideas and repeating historical experiments, teachers not only will rediscover electricity, but also will learn investigation techniques in science. New topics. *May be repeated for credit.* Class meets at The Bakken (A Library and Museum of Electricity in Life), 3537 Zenith Ave S, Minneapolis, MN 55416. Taught by Nahum Kipnis of the Bakken staff: telephone (612) 927-6508 after 11 a.m. (Prereq general physics, #. Qualified students may register for graduate credit at the University of Minnesota except for physics grad students or for grad minors in physics. A joint Day/Extension class limited to 15 Extension students)

Fall Qtr, ★○Sec 1, M, 6-9, The Bakken, Kipnis

## Plant Biology (PBio)

(220 Biological Science: 625-1234)

### College of Biological Sciences

Textbooks for most PBio courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

(See also Biol 1103, General Botany; Plant Pathology; Compleat and Practical Scholar noncredit courses; and Compleat Scholar Weekends)

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Plant Biology. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**Continuing Education for Women (CEW) sections available in the following courses:** PBio 1012

**PBio 1012 (formerly Bot 1012) PLANTS USEFUL TO HUMANS.** 4 credits, §Bot 1012, tuition\*: Resident \$318; Non-resident \$922.20.

Roles that plants play and have played in human biological and cultural development. Lectures and demonstrations. (No prereq)

Fall Qtr, Sec 1, T, 6:30-9:30, FordH 120

Spring Qtr, Sec 2, W, 1-4, MacP. Offered through Continuing Education for Women

(See also CSch 0340, Plants and People: Ethnobotany of the Western Great Lakes)

## Plant Pathology (PIPa)

(495 Borlaug Hall: 625-8200)

### College of Agricultural, Food, and Environmental Sciences

Textbooks for most PIPa courses are available at University of Minnesota Bookstore—St. Paul (624-9200).

(See also Agriculture; Plant Biology; Horticulture; and Compleat and Practical Scholar noncredit courses)

Robert A. Blanchette, Professor  
David H. MacDonald, Professor

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Plant Pathology. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**PIPa 1002 PLANT DISEASES AND YOUR GARDEN.** 2 credits, tuition\*: Resident \$159; Non-resident \$461.10.

Characteristics of the various causes of plant diseases that can affect the growth of flowers, small fruits, and vegetables in Upper Midwest gardens. Important diseases that may appear in your garden, why they can occur, and how to avoid them. (No prereq. A joint Day/Extension class limited to 25 Extension students)

Fall Qtr, ★♻Sec 1, Th, 6:20-9:20, BorH 365, 295, StP Campus, MacDonald

**PIPa 1003 DISEASES OF TREES.** 2 credits. Tentatively scheduled for winter 1997.

**PIPa 1004 DISEASES OF TURFGRASS.** 2 credits, tuition\*: Resident \$159; Non-resident \$461.10. U.S. turf diseases with emphasis on diseases in the Upper Midwest. Plant pathology and commercial/homeowner disease management. Labs emphasize disease diagnosis. (No prereq. A joint Day/Extension class limited to 20 Extension students)

Winter Qtr, ★♻Sec 1, M, 6:20-9:20, BorH 365, 296, StP Campus

### Polish

See Area Studies Programs; and the Institute of Languages and Literatures

### Political Science (Pol)

(1414 Social Sciences: 624-4144)

#### College of Liberal Arts

Textbooks for most Pol courses are available at University of Minnesota Bookstore—West Bank (625-3000).

(See also International Relations; Interdepartmental Study; History; Interdepartmental Study; Complete Scholar noncredit courses; and Public Affairs)

Terence W. Ball, Professor  
Mary G. Dietz, Associate Professor  
John M. Dolan, Professor of Philosophy  
Raymond Duvall, Professor  
James Farr, Professor  
William Flanigan, Professor  
Edwin Fogelman, Professor  
John Freeman, Professor  
August H. Nimtz, Jr., Associate Professor  
Martin Sampson, Associate Professor  
Steven Smith, Professor  
John L. Sullivan, Professor

**Political Science Graduate Students:** All Political Science 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 adviser (625-8517).

#### BA Major Sequence

##### Required Preparatory Courses

1001, 3051

One of the following four courses: 1025, 1026, 1054 and 1061

##### Major Requirements

At least 39 credits in 3000- or 5000-level political science courses (including 3051). Of these 39 credits, at least two courses must come from the Political Theory, Comparative Government and Politics, or International Relations subfields; and at least two courses must come from the Politics and Behavior, American Governmental Systems and Processes, or Public Law subfields. No more than four courses may be taken in one subfield. All course work must be taken on the A-F grading system, with grades of C or better.

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

*A minor is also available in Political Science. Interested students should call the Departmental Undergraduate Advising Office, 624-8517 or 624-4144, for information.*

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Political Science. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**Continuing Education for Women (CEW) sections available in the following courses:** Pol 3051

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**Interdisciplinary Offering:**

**Pol 1001/Econ 1102**

The following two courses will be offered concurrently with course material team taught, interwoven, and integrated where appropriate. **Students must register for both courses, using separate registration forms for each course.** This is a total of 9 credits.

**Pol 1001 AMERICAN GOVERNMENT AND POLITICS.** 5 credits, tuition\*: Resident \$397.50; Non-resident \$1152.75. (IS)

Principles, organization, processes, functions of government, and the interplay of political forces in the United States. Attention given throughout to current issues. (Prereq ¶Econ 1102, sec 4. Meets concurrently with Econ 1102, sec 4. Limited to a combined total of 28)

Winter Qtr, ★Sec 2 TTh, 6:20-9:20, HHHctr 60, Freeman, Green

**Econ 1102 PRINCIPLES OF ECONOMICS: MACRO-ECONOMICS.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Principles underlying economic activity and the way these principles work out through our economic institutions. Macro-economics: national income, money and banking, economic growth. (Prereq 1101 or equivalent, ability to handle simple graphics and elementary algebra at the level of GC 0623 and GC 0631, ¶Pol 1001, sec 2. Meets concurrently with Pol 1001, sec 2. Limited to a combined total of 28)

Winter Qtr, ★Sec 4, TTh, 6:20-9:20, HHHctr 60, Freeman, Green

(About the instructors: John R. Freeman is Professor of Political Science, and George D. Green is Associate Professor of History)

**Also see Interdepartmental Study.**

**General Education**

**Pol 1001 AMERICAN GOVERNMENT AND POLITICS.** 5 credits, tuition\*: Resident \$397.50; Non-resident \$1152.75. (IS)

Principles, organization, processes, functions of government, and the interplay of political forces in the United States. Attention given throughout to current issues. (No prereq)

Fall Qtr, Sec 1, M, 6-9:15 AndH 270  
 Winter Qtr, Sec 3, W, 6:30-9:45, AndH 270  
 Spring Qtr, ⓉSec 4, T, 6:30-9:45, AndH 330 (A joint Day/Extension class)

(See also CSch 0392, Can I Make a Difference Gaining Public Access to Governmental Decision Making)

**Pol 1025 WORLD POLITICS.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Contemporary international relations; forms of state interaction; problems of conflict and cooperation. (No prereq)

Fall Qtr, Sec 1, Th, 6:20-8:50, BlegH 140, Duvall  
 Winter Qtr, Sec 2, M, 6:20-8:50, AndH 210

**Pol 1026 AMERICAN FOREIGN POLICY.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Institutions and processes that determine American foreign policy; major developments in U.S. foreign policy since World War II; contemporary issues of U.S. policy. (No prereq)

Spring Qtr, Sec 1, M, 6:20-8:50, AndH 370, Sampson

(See also CSch 0391, Morality and Foreign Policy)

**Pol 1041 CONTEMPORARY POLITICAL IDEOLOGIES.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20. (IS)

Major modern ideologies such as liberalism, democracy, conservatism, socialism, communism, fascism, nationalism, imperialism, racism. Adequacy of alternative ideologies for analysis and solution of political and social problems. (No prereq)

Fall Qtr, Sec 1, T, 6:20-8:50, BlegH 10,

Fogelman

**Pol 1054 INTRODUCTION TO COMPARATIVE POLITICS.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Politics of democratic, communist, and third world nations; examines the causes and consequences of different forms of political life. (No prereq)

Winter Qtr, Sec 1, Th, 6:20-8:50, BlegH 130

**Pol 1061 INTRODUCTION TO POLITICAL THOUGHT.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Central issues in politics—justice, freedom, authority, order, conflict, and revolution—are examined through readings of major texts in Western political thought. (No prereq)

Spring Qtr, Sec 1, W, 6:20-8:50, BlegH 235, Dietz

(See also CSch 0306, Women and Classical Political Thought)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Pol 3051 (formerly 1051) INTRODUCTION TO POLITICAL ANALYSIS.** 4 credits, \$1051, tuition\*: Resident \$344; Non-resident \$997.60.

Formation of political communities, political participation, policy making, compliance, legitimacy, political development, types of political systems. Empirical and normative problems. Comparisons among major countries. (No prereq)

Winter Qtr, Sec 1, W, 9 a.m.-12:15, MacP.

*Offered through Continuing Education for Women*

Spring Qtr, Sec 2, W, 6:20-8:50, AndH 230

### Political Theory

**Pol 3659 AMERICAN POLITICAL THOUGHT.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

From colonial times to present: Puritanism; Revolution; Constitution; utopianism; sectionalism and pluralism; anarchist, socialist, populist, and syndicalist thought; social Darwinism; conservatism; political thought in law and literature. (No prereq)

Fall Qtr, Sec 1, W, 6:20-8:50, AndH 310, Farr

**Pol 3661 DEMOCRATIC THEORY.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

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. (Prereq 3051 or 9 cr in social sciences or #)

Winter Qtr, Sec 1, T, 6:20-8:50, BlegH 105, Farr

**Pol 5610 SELECTED TOPICS IN POLITICAL THEORY; ENVIRONMENTAL ETHICS, POLITICS, AND PUBLIC POLICY.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

The central focus is duties within and beyond "borders," and the question: who or what belongs to the mortal community of creatures deserving protection and respect? The borders within and beyond which humans act are to be understood both literally (as legal/political boundaries) and metaphorically (as borders between generations of human beings or between human and non-human animal species). Asking who belongs to the community of those deserving protection and respect, class participants pay attention to their roles, relations, and actions as citizens and as members of the planet's most powerful and potentially dangerous species. To that end, the class will examine moral obligations, ask

what "freedom" means, and examine what responsibilities are entailed by that freedom and what legitimate limits might be placed on the freedom to speak and act. Beyond such civic concerns, class members will look closely at unexamined assumptions about nature, the natural environment, other species, and future generations. Course readings will include classic and contemporary sources. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with LS 5610, sec 1. Limited to a combined total of 30)

Winter Qtr, ★Sec 1, Th, 6:20-8:50, FordH 160, Ball

(See also CSch 0393, A Practical and Legal Guide to Preserving Green Space in Your Community)

### Comparative Government and Politics

**Pol 3477 (formerly 3773) POLITICAL DEVELOPMENT.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Political processes and problems associated with economic development processes; the political economy of underdevelopment and development; problems of state building and the development of political institutions. (Prereq 1054 or 3051 or #. A joint Day/Extension class)

Spring Qtr, ●Sec 1, Th, 6:20-8:50, AndH 330

**Pol 5461 WESTERN EUROPEAN GOVERNMENT AND POLITICS.** 5 credits, tuition\*: Resident \$430; Non-resident \$1247; Resident Graduate credit \$590; Non-resident Graduate credit \$1298; Resident Graduate School credit \$1077.50; Non-resident Graduate School credit \$2370.50.

Political institutions in their social settings; power and responsibility; governmental stability; political decision making, government and economic order. (Prereq 3051 or nonpolitical science grad or #. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr, Sec 1, T, 6-9:15, AndH 230

### International Relations

**Pol 3835 THE INTERNATIONAL SYSTEM.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Structure of international system; balance of power, bipolar and other international systems; theories of stability, change, conflict, and cooperation. (No prereq)

Fall Qtr, Sec 1, T, 6:20-8:50, AndH 210

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**Pol 3836 FOREIGN POLICY DECISION MAKING.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Theories and examples of foreign policy decision-making processes, including policy formulation and implementation. Examples drawn from various foreign policy issues. (No prereq)  
Winter Qtr, Sec 1, T, 6:20-8:50, AndH 350

**Pol 3872 INTERNATIONAL ORGANIZATIONS AND THE ENVIRONMENT.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Considers various understandings of international relations/international organizations as they pertain to international efforts to improve the environment. Focuses on intergovernmental organization and governmental policy. Examines history of international environmental cooperation and analyzes selected recent topics such as ozone depletion, ocean quality, or rain forest preservation. Topics vary. (Prereq political science or international relations major or 12 cr in social sciences or #. A joint Day/Extension class)

Winter Qtr, Sec 1, W, 6:20-8:50, AndH 350,  
Sampson

### Politics and Behavior

**Pol 3739 POLITICS OF ETHNIC COMMUNITIES.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Cross-cultural study of politics of ethnic communities; emphasis on politics of black communities in the United States. Internal community politics and their local and national political systems. (Prereq 6 cr in social sciences)

Spring Qtr, Sec 1, M, 6:20-8:50, AndH 230,  
Nimt

**Pol 3766 POLITICAL PSYCHOLOGY.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Political learning; processes of political perception and information processing; subjectivity and political ideology; personality and political behavior; symbols and politics. (Prereq 1001 or equivalent or #)

Fall Qtr, Sec 1, W, 6:20-8:50, AndH 370,  
Sullivan

### American Governmental Systems and Processes

**Pol 3308 THE UNITED STATES CONGRESS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60. (IS)

Internal organization, committee system, party leadership, norms, recruitment; legislative policy making; relationship with the president and bureaucracy; interest group, political party, and constituency influences on the congressional process. (Prereq 1001 or equivalent or #)

Spring Qtr, Sec 1, M, 6:20-8:50, RarigC 610,  
Smith

**Pol 3310 TOPICS IN AMERICAN POLITICS: PRESIDENTIAL NOMINATING POLITICS '96.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Nominating process from the pre-primary period through the primaries to the nominating conventions. Emphasis on 1996 with readings and examples drawn from earlier years. (Prereq 1001 or equivalent or #)

Spring Qtr, Sec 1, Th, 6:20-8:50, BlegH 155,  
Flanigan

### Portuguese (Port)

(34 Folwell Hall: 625-5858)

#### College of Liberal Arts

Spanish and Portuguese

Textbooks for most Port courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Port. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**No Port courses offered through Extension Classes 1995-96**

### Practical Scholar

(See page 397)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

### Professional and Career Development

Business, industry, and management programs offered by the **Management Advancement Program** are designed to provide work-related training for people in corporate business, small business, and nonprofit or government settings. These non-credit programs offer both theory and practice in such areas as leadership, management, organizational change, communication, computers, and finance. Programs are scheduled in daytime seminar and evening class formats and are held at convenient locations both on and off campus. Instructors are primarily University of Minnesota faculty and administrative staff or professionals from prominent local organizations. For further information and complete course listings and descriptions, call (612) 626-8713.

### Psychology (Psy)

(N218 Elliott Hall: 625-4042)

#### College of Liberal Arts

Textbooks for most Psy courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

(See also Child Psychology; Educational Psychology; General College; Interdepartmental Study; Compleat and Practical Scholar noncredit courses; and Women's Studies)

Thomas F. Brothen, Professor in the General College

William Grove, Associate Professor

Beth Haney, Instructor

William G. Iacono, Professor

Daniel Kersten, Associate Professor

Jerome Kroll, Adjunct Professor

Mary Ann Mattoon, Adjunct Professor

Mary Jo Meadow, Adjunct Professor

Carol Pazandak, Professor

Gail B. Peterson, Associate Professor

Auke Tellegen, Professor

**A major in Psychology can be completed in the evening.**

Those courses required in the major are offered yearly. Interested students should discuss plans with an adviser (625-2500).

If you are contemplating a major in psychology, consult the Undergraduate Advising Office, 105 Elliott Hall (625-8520).

**General Education**—Courses recommended for nonmajors include 1001, 3011, 3031, 3051, 3061, 3101, 3135, 3201, 3604, 3617, and 5141.

#### B.A. Major Sequence

**Required Preparatory Courses**—1001, 1004-1005

(to be taken as soon as possible after 1001)

**Major Requirements**—At least 34 credits chosen as follows: 3801 or Stat 3011 (to be taken as soon as possible after 1001)

Two courses from 3011, 3031, 3051, 3061 or 5061, 5011, 5012-5013, 5014, 5015, 5034, 5036, 5037, 5038, 5051, 5054, 5137, 5606

Two courses from 3014, 3101, 3135 or 5135, 3201, 3604, 3617, 3666, 5121, 5136, 5138, 5141, 5202, 5204, 5205, 5206, 5207, 5501, 5701, 5702, 5703, 5704, 5705; CPsy 3303 or 5303, 3309 or 5301

Four elected 3xxx-5xxx-level psychology courses (a total of two from 3960, 3970, 3990 may be used)

Major project: 3902

All major courses must be taken on A-F grading except 3902 which may be taken A-F or S-N. At least four upper division courses in psychology must be taken on the Twin Cities campus.

Psychology majors, especially those considering graduate work, are urged to elect mathematics and natural, social, and biological science courses. Prospective graduate students also should take further work in statistics and computer programming. A limited number of child psychology courses may be completed through the Institute of Child Development (double psychology-child psychology majors are not permitted).

#### Minor Sequence—General Psychology:

**Required Preparatory Courses**—1001, 3801 or Stat 3011 or equivalent

**Minor Requirements**—two courses from 3011, 3031, 3051, 3061 or 5061, 5011, 5012-5013, 5014, 5015, 5031, 5034, 5036, 5037, 5038, 5051, 5054, 5137, 5606; two courses from 3014, 3101, 3135 or 5135, 3201, 3604, 3617, 3666, 5121, 5136, 5138, 5141, 5202, 5204, 5205, 5206, 5207, 5501, 5701, 5702, 5703, 5704, 5705

All minor courses must be taken A-F. At least two upper division courses in psychology must be taken on the Twin Cities campus.

The minor program must be approved by a psychology undergraduate adviser.

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



**Minor Sequence—Natural Science:**

**Required Preparatory Courses**—1001, 3801 or Stat 3011 or equivalent

**Minor Requirements**—two courses from 3011, 5011, 5012-5013, 5014, 5015; two courses from 3031, 3051, 3061 or 5061, 5031, 5034, 5036, 5037, 5038, 5051, 5054, 5137, 5606

All minor courses must be taken A-F. At least two upper division courses in psychology must be taken on the Twin Cities campus.

The minor program must be approved by a psychology undergraduate adviser.

**Minor Sequence—Social Science:**

**Required Preparatory Courses**—1001, 3801 or Stat 3011 or equivalent

**Minor Requirements**—two courses from 3014, 3101, 3201, 3604, 3617, 5202, 5204, 5205, 5206, 5207; one course from 3135 or 5135, 3666, 5121, 5136, 5138, 5141, 5501, 5701, 5702, 5703, 5704, 5705; one elective 3xxx- or 5xxx-level psychology course from those listed as course options in the Social Science Minor Sequence.

All minor courses must be taken A-F. At least two upper division courses in psychology must be taken on the Twin Cities campus.

The minor program must be approved by a psychology undergraduate adviser.

**You need not be a major or minor in Psychology to register for these classes.**

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Psychology. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**Continuing Education for Women (CEW) sections available in the following courses:** Psy 1001, 3101, 3604

**Psy 1001 INTRODUCTION TO PSYCHOLOGY.** 5 credits, tuition\*: Resident \$397.50; Non-resident \$1152.75. (IS)

Introduction to the study of human behavior. Prerequisite for all advanced courses in psychology. (No prereq. Limited to 80)

Fall Qtr, ★Sec 1, MW, 6:20-8:15, SmithH 231

Fall Qtr, ★Sec 2, MW, 6:20-8:15, Phys 166

Fall Qtr, ★Sec 3, MW, 7-8:55, Richfield HS 244 (Limit 30)

Fall Qtr, ★Sec 4, TTh, 10 a.m.-12, Fairview Comm Ctr, 1910 W Cty Rd B, Roseville (Limit 35). Offered through Continuing Education for Women

Fall Qtr, ★Sec 5, TTh, 6:20-8:15, Phys 133

Winter Qtr, ★Sec 6, M, 6-8:10 (plus 2 hr lab arr), ApH 128, Brothen (Limit 40). *An individualized tutorial section: students work directly with the instructor in class and in campus computer labs to complete self-paced course; no previous experience with computers necessary*

Winter Qtr, ★Sec 7, MW, 6:20-8:15, Phys 210

Winter Qtr, ★Sec 8, TTh, 6:20-8:15, Phys 131

Winter Qtr, ★Sec 9, TTh, 6:20-8:15, Phys 133

Winter Qtr, ★Sec 10, TTh, 7-8:55, Roseville Area HS 145 (Limit 35)

Spring Qtr, ★Sec 11, MW, 6:20-8:15, Phys 166

Spring Qtr, ★Sec 12, MW, 6:20-8:15, Phys 133

Spring Qtr, ★Sec 13, TTh, 6:20-8:15, Phys 166

**Psy 1003 APPLICATION OF PSYCHOLOGY TO LIVING.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

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, T, 6:20-8:50, EltH N119

Spring Qtr, Sec 2, M, 6:20-8:50, Arch 45

**Psy 1004-1005 INTRODUCTORY LABORATORY PSYCHOLOGY.** 4 credits each quarter, tuition\* each quarter: Resident \$318; Non-resident \$922.20.

Experiments with contemporary subject matter such as human and animal learning, problem solving, visual perception, measurement of general and special abilities and personality traits. (Prereq 1001 or ¶1001 for 1004; 1004 for 1005. Limited to 24)

Fall Qtr, 1004, ★Sec 1, M, 6:20-8:50, EltH 50-60

Fall Qtr, 1004, ★Sec 2, T, 6:20-8:50, EltH 150-160

Winter Qtr, 1004, ★Sec 3, T, 6:20-8:50, EltH 50-60

Winter Qtr, 1004, ★Sec 4, T, 6:20-8:50, EltH 50-60

Winter Qtr, 1005, ★Sec 1, Th, 6:20-8:50, EltH 50-60

Spring Qtr, 1005, ★Sec 2, M, 6:20-8:50, EltH 50-60, Kersten

Spring Qtr, 1005, ★Sec 3, M, 6:20-8:50, EltH 150-160

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Psy 1011 CAREER DECISION MAKING.** 2 credits. Offered alternate years. Tentatively scheduled for 1996-97.

(See also Practical Scholar career development courses, page 455)

**Psy 3011 INTRODUCTION TO THE PSYCHOLOGY OF LEARNING.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Basic methods. Fundamental concepts and principles governing the learning process. (Prereq 1005 or #)

Fall Qtr, Sec 1, M, 6:20-8:50, Phys 210, Peterson  
Spring Qtr, Sec 2, M, 6:20-8:50, Phys 210, Peterson

**Psy 3014 INTRODUCTION TO APPLIED PSYCHOLOGY.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

History and survey of professional applications of psychology in work, school, and community settings. (Prereq 1001)

Spring Qtr, Sec 1, T, 6:20-8:50, NichH 109

**Psy 3031 SENSATION AND PERCEPTION.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Psychological, biological, and physical aspects of sensory experience in humans and animals. Emphasis on vision and hearing. (Prereq 1004)

Winter Qtr, Sec 1, T, 6:20-8:50, Arch 45

Spring Qtr, Sec 2, T, 6:20-8:50, SmithH 331

**Psy 3051 INTRODUCTION TO COGNITIVE PSYCHOLOGY.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Research and theoretical concepts in study of cognitive factors in perception, memory, reading, and problem solving. (Prereq 1005 or #1005)

Fall Qtr, Sec 1, T, 6:20-8:50, Phys 143

**Psy 3061 INTRODUCTION TO BIOLOGICAL PSYCHOLOGY.** 4 credits, \$5061, tuition\*: Resident \$344; Non-resident \$997.60. (IS)

Basic neurophysiology and neuroanatomy, neural mechanisms of motivation, emotion, sleep-wakefulness cycle, and learning and memory in animals and humans. Neural basis of abnormal behavior and drug abuse. (Prereq 1005 or Biol 1009 or #)

Spring Qtr, Sec 1, T, 6:20-8:50, Phys 143

**Psy 3101 INTRODUCTION TO PERSONALITY.** 4 credits, \$5101, tuition\*: Resident \$344; Non-resident \$997.60. (IS)

Concepts and issues in personality theory, personality research, and personality assessment. (Prereq 1001. Limited to 60)

Fall Qtr, ★Sec 1, T, 6:20-8:50, SmithH 331, Tellegen

Winter Qtr, ★Sec 2, M, 9:30 a.m.-12, MacP (Limit 35). Offered through Continuing Education for Women

Winter Qtr, ★Sec 3, T, 6:20-8:50, SmithH 231

Spring Qtr, ★Sec 4, T, 6:20-8:50, SmithH 231

**Psy 3135 INTRODUCTION TO INDIVIDUAL DIFFERENCES.** 4 credits, \$5135, tuition\*: Resident \$344; Non-resident \$997.60.

Differential methods in study of human behavior. Impact and importance of individual differences in modern society; instruments of measurement and behavior prediction in differential psychology; major determinants of individuality. (Prereq 3801 or equivalent)

Winter Qtr, Sec 1, T, 6:20-8:50, EltH N119

**Psy 3201 INTRODUCTION TO SOCIAL PSYCHOLOGY.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Survey of theories and research in social psychology. Includes the effects upon the individual's attitudes and behavior of other persons, mass communications, and group membership. (Prereq 1001)

Fall Qtr, Sec 1, M, 6:20-8:50, MurH 308

Spring Qtr, ★Sec 2, M, 6:20-8:50, Roseville Area HS 244 (Limit 35)

**Psy 3604 INTRODUCTION TO ABNORMAL PSYCHOLOGY.** 4 credits, \$5604, tuition\*: Resident \$344; Non-resident \$997.60. (IS)

The field of abnormal psychology. Etiologies of behavior disorders; discussion of available treatments. (Prereq 1001. Limited to 75)

Fall Qtr, ★Sec 1, T, 6:30-9, Roseville Area HS 146 (Limit 35)

Fall Qtr, ★Sec 2, Th, 6:20-8:50, EltH N119

Winter Qtr, ★Sec 3, M, 6:20-8:50, EltH N119, Iacono

Winter Qtr, ★Sec 4, Th, 6:20-8:50, NichH 213

Spring Qtr, ★Sec 5, M, 9:30 a.m.-12, MacP (Limit 35). Offered through Continuing Education for Women

Spring Qtr, ★Sec 6, M, 6:20-8:50, Arch 30

Spring Qtr, ★Sec 7, T, 7-9:30, Richfield HS 143 (Limit 35)

Spring Qtr, ★Sec 8, W, 6:20-8:50, SmithH 231

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**Psy 3607 SURVEY OF CLINICAL INTERVENTION METHODS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Introduction to a range of therapeutic procedures for dealing with abnormal behavior in children and adults. The focus will be on the theory and philosophy underlying the particular schools of therapy rather than emphasizing specific methods of behavior change. (Prereq 3604 or 5604)

Spring Qtr, Sec 1, Th, 6:20-8:50, NichH 207

**Psy 3617 INTRODUCTION TO CLINICAL PSYCHOLOGY.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Survey of historical developments and contemporary issues in clinical psychology. Focuses upon relevant research and clinical trends in psychological assessment methods and various prevention and intervention strategies. **Must be taken A-F.** (Prereq 3604 or 5604H, 3801 or equivalent)

Fall Qtr, Sec 1, W, 6:20-8:50, EltH N119, Grove

**Psy 3801 INTRODUCTION TO STATISTICAL METHODS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Quantification in research problems in psychology. Descriptive and inferential statistics, hypothesis testing, nonparametric statistics. Examples from various areas of psychology. (Prereq 1001, GC 0625 or equiv. Limited to 50)

Fall Qtr, ★Sec 1, M, 6:20-8:50, Arch 30

Fall Qtr, ★Sec 2, Th, 6:20-8:50, Arch 10

Winter Qtr, ★Sec 3, T, 6:20-8:50, SmithH 331

Winter Qtr, ★Sec 4, W, 6:20-8:50, Arch 30

Winter Qtr, ★Sec 5, Th, 6:20-8:50, Arch 15

Spring Qtr, ★Sec 6, M, 6:20-8:50, NichH 109

Spring Qtr, ★Sec 7, T, 6:20-8:50, Arch 15

Spring Qtr, ★Sec 8, W, 6:20-8:50, EltH N119

**Psy 3902 MAJOR PROJECT IN PSYCHOLOGY.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Seminar for completion of the undergraduate major project paper. Psy 3902 is a major requirement for psychology majors; it is offered only occasionally through Extension Classes to meet student needs. (Prereq 1005, 3801, and jr or sr psychology major. Limited to 25)

Winter Qtr, ★Sec 1, T, 7:05-8:50, NichH 209

Spring Qtr, ★Sec 2, T, 7:05-8:50, NichH 209

**Psy 3911 PSYCHOLOGY OF RELIGION.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60. (IS)

Topical approach to the study of religious behavior. Areas covered include guilt, alienation, transcendence, altered states of consciousness, impulse con-

trol, conscience, values and beliefs, symbolic behavior, self-actualization, psychopathology, and the psychological interpretation of religious scriptures. (Prereq 1001 or #)

Spring Qtr, Sec 1, M, 6:20-8:50, EltH N119,

Meadow

(See also Religious Studies)

**Psy 3960 UNDERGRADUATE SEMINAR: PSYCHIATRY AND SOCIAL CONTROL.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Topics include definitions of mental illness, social labeling, anti-psychiatry and the writings of Thomas Szasz, deinstitutionalization, involuntary hospitalization, homelessness, civil commitment, right to refuse treatment, cocaine mothers, insanity defense, release from hospital. (Prereq 1001. Limited to 40)

Winter Qtr, ★Sec 1, T, 6-8:30, MoosT 2-520,

Kroll

Spring Qtr, ★Sec 2, T, 6-8:30, Phys 210, Kroll

**Psy 3960 UNDERGRADUATE SEMINAR: OVERVIEW OF PSYCHOLOGICAL TESTING.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Survey of issues in the development and administration of psychological tests. Purposes and types of tests, test administration and scoring, characteristics of good tests. Examples from the traditional domains of psychological assessment including ability, personality, guidance, and personnel selection. (Prereq 1001, 3801. Limited to 50)

Winter Qtr, ★Sec 3, M, 6:20-8:50, SmithH 231

Spring Qtr, ★Sec 4, M, 6:20-8:50, SmithH 231

**Psy 5105 THE ANALYTICAL PSYCHOLOGY OF C.G. JUNG.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Major Jungian psychological theories: extroversion-introversion, function types, complexes, ego, persona, shadow, animus, anima, self, personal and collective unconscious, symbolism, psychic energy, individuation, dream interpretation, psychotherapy. Relevant empirical research and clinical material. (Prereq 3101 or 5101 or #. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr, Sec 1, W, 6:20-8:50, NichH 207,

Mattoon

(See also CSch 0331, Fundamentals of Jungian Psychology)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

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## Course Descriptions

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**Psy 5141 PSYCHOLOGY OF WOMEN.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Psychological and physical sex differences; developmental and environmental influences on dependency, aggression, achievement motivation, and achievement. Sex roles and sexuality during various life phases. (Prereq 1001. Qualified students may register for

graduate credit at the University of Minnesota)

Fall Qtr, Sec 1, T, 6:20-8:50, FordH 285

Winter Qtr, Sec 2, M, 5:30-8, NichH 216

(See also CSch 0333, *The Woman in the Mirror: A Glimpse of Jungian Psychology of Women*)

**Psy 5202 ATTITUDES AND SOCIAL BEHAVIOR.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Attitude theory, measurement, and attitude change research in social psychology. The structure, function, and formation of attitudes; the relationship between attitudes and various social behaviors; basic principles of attitude change. (Prereq 3201 or #. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr, Sec 1, W, 6:20-8:50, NichH 216,

Haney

**Psy 5205 (formerly 3206) APPLIED SOCIAL PSYCHOLOGY.** 4 credits. **Offered alternate years. Tentatively scheduled for 1996-97.**

**Psy 5501 VOCATIONAL PSYCHOLOGY.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Individual differences analysis of the work personality and 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 #. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr, Sec 1, W, 6:20-8:50, EltH N119

**Psy 5701 PERSONNEL AND INDUSTRIAL PSYCHOLOGY.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Application of principles of individual differences and psychological measurement to problems of recruiting, selecting, evaluating, and training members of ongoing organizations. Topics include job analysis, job behavior description, performance measurement, selection and placement strategies, minority group employment, and utility of organizational strategies in the selection and occupational placement of persons. (Prereq 3801 or equivalent, 8 cr in psychology, or #. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr, Sec 1, Th, 6:20-8:50, EltH N119

(See also Industrial Relations)

**Psy 5703 PSYCHOLOGY OF ORGANIZATIONAL TRAINING AND DEVELOPMENT.** 4 credits. **Offered alternate years. Tentatively scheduled for 1996-97.**

**Psy 5960 SPECIAL TOPICS: COLLEGE STUDENTS WITH DISABILITIES.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Services for college students with disabilities and the role of student services professionals. Issues of access, accommodation, retention, vocational choice, preparation for employment, historical and current attitudes toward treatment of disability, identities of those with disabilities, ethical issues in counseling, advances in technology, unmet needs, and the Americans with Disabilities Act. *Building and classroom are wheelchair accessible; other disability accommodations—such as sign language interpreters, alternate print formats—provided on request.* (Prereq grad standing or 12 cr in social sciences for undergrads. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr, Sec 1, TTh, 4:30-6:30, EltH N227,

Pazandak

For information on noncredit workshops or conferences in psychology, please contact the Department of Professional Development and Conference Services, Registrar, Nolte Center for Continuing Education; telephone 625-6616.

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\* Tuition definitions of Resident and Non-resident explained on page 24.

**Public Affairs (PA)**

(225 Humphrey Center: 626-0564)

**Humphrey Institute of Public Affairs**

Textbooks for most PA courses are available at University of Minnesota Bookstore—West Bank (625-3000).

(See also Economics; Interdepartmental Study; Political Science; International Relations; Sociology; and General College)

Babak Armajani, Senior Fellow  
 Zbigniew Bochniarz, Senior Fellow  
 John Brandl, Professor  
 Richard S. Bolan, Professor  
 John Bryson, Professor  
 Candace Campbell, Fellow  
 Steve Corneli, Senior Fellow  
 Barbara C. Crosby, Senior Fellow  
 William Díaz, Senior Fellow  
 Kenneth Keller, Professor  
 Barbara Lukermann, Senior Fellow  
 Lee Munnich, Senior Fellow  
 Joe Nathan, Senior Fellow  
 David Selligren, Senior Fellow

**PA 5102 LEGAL ENVIRONMENT OF PUBLIC AFFAIRS.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

The legal concept of public policy and decision making. Role of the courts in public participation, policy making, and administration, including an introduction to legal reasoning and the use of law and legal resources to policy issues and to management administration processes. (Prereq grad student or adult special or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 25 Extension students)

Fall Qtr, ★●Sec 1, T, 6:15-8:45, HHCtr 25

**PA 5113 PUBLIC SERVICES REDESIGN.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Study of theory, strategy, politics, and some of the practical mechanics required to adapt the public service system, given the constraints on resources and continuing resource for effectiveness and equity. In-class and out-of-class interviews of indi-

viduals involved in redesign. (Prereq 5011 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Spring Qtr, ★●Sec 1, M, 6:30-9, HHCtr 30,  
 Brandl

**PA 5191 TOPICS: POLICIES AND PRACTICES OF PHILANTHROPY.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

An opportunity for those with relationships to philanthropic foundations, and those seeking a better understanding of philanthropy as a professional career, to examine assumptions about philanthropy, explore a sampling of philanthropic policies and practices, and consider some of the public policy implications of a powerful philanthropic sector in a democratic society. (Prereq grad student or adult special or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Spring Qtr, ★●Sec 1, T, 5:45-8:15, Law 1, Díaz

**PA 5192 TOPICS: MANAGING BEYOND BUREAUCRACY.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Builds on students' knowledge and experiences and challenges them to develop effective management solutions in complex situations. Using management case studies, mostly from the public sector, students explore the tension between prevalent bureaucratic norms fostered in the reform movements of the early part of this century and an emerging emphasis on customer-focused public organizations. Class discussions will focus on five broad strategies for transforming bureaucracies into customer-focused organizations: finding the organization's purpose in its customers, measurement and feedback, winning compliance, aligning decision making and accountability, and employment methods for continuous improvement. (Prereq grad student or adult special or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Winter Qtr, ★●Sec 1, W, 6:15-8:45, HHCtr 30,  
 Armajani

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**PA 5193 TOPICS: POLICIES AND PRACTICES IN NONPROFIT GOVERNANCE.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Provides an understanding of the nonprofit sector in American civil society and its role in public policy making and implementation. Analyzes issues of nonprofit governance and management. Among the topics covered are the historical role of the nonprofit sector in the U.S., the sector's role in the American welfare debate; the legal environment and for-nonprofit organizations; board recruitment and development; the executive director and staff functions; and how to begin a nonprofit organization. (Prereq grad student or adult special or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Fall Qtr, ★●Sec 1, Th, 5:30-8, HHCtr 20, Diaz

**PA 5200 INTRODUCTION TO PLANNING.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Concepts and issues in planning as a profession. Historical development of planning as a public activity. The organization and role of planning in public agencies and private organizations. (Prereq grad student or adult special or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Fall Qtr, ★●Sec 1, W, 6:15-8:45, HHCtr 25, Lukermann

**PA 5211 GROUP TECHNIQUES IN PUBLIC AFFAIRS AND PLANNING.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

By the end of this survey course participants should have a good grasp of group techniques as they are commonly used in public affairs and planning, will be able to use several of them, and will know where and how to find out more about them. Participants should also know how to assemble and manage a group decision support system. This course is a complement to courses that teach more analytic, technical, or quantitative skills. Both sets of skills

are important and public endeavors rarely are successful if capable work isn't done using both sets. (Prereq grad student or adult special or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Fall Qtr, ★●Sec 1, T, 7-9:30, Arr, Bryson

**PA 5221 LAW AND URBAN AFFAIRS.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Designed primarily for the nonlawyer who is interested in understanding how the law affects the operation of major functions of urban governments, particularly those functions having to do with planning, land use, and housing. The objective of the course is to acquaint nonlawyers with the major legal concepts and issues affecting urban planning and development; to provide an understanding of how to make creative use of law, legal ideas and methods in the resolution of urban policy problems, and to develop an appreciation of the importance of the fundamental legal powers on urban governments and the constitutional, statutory, and judicial limitations on exercise of those powers by governments, agencies, and officials. (Prereq grad student or adult special or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Spring Qtr, ★●Sec 1, Th, 6:15-8:45, HHCtr 25, Sellergren

**PA 5230 STRATEGIC PLANNING AND MANAGEMENT.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Strategy formulation, adoption, and implementation in government and nonprofit agencies. Dealing with agency strengths and weaknesses and external opportunities and threats. Stakeholder management. Case examples. (Prereq grad student or adult special or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Winter Qtr, ★●Sec 1, T, 7-9:30, HHCtr 25, Bryson

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**PA 5231 STRATEGY AND TACTICS IN PROJECT PLANNING.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

How goals and contextual factors affect planning. Appropriate strategic and tactical choices to make during the planning process; case examples of planning for public programs, projects, products, or services. (Prereq grad student or adult special or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Winter Qtr, ★●Sec 1, M, 6:15-8:45, HHCtr 25, Bolan

**PA 5291 TOPICS: URBAN TRANSPORTATION POLICY AND PLANNING.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Irving Hand has written that transportation should be "a catalyst for elevating the quality of the urban environment," yet in so many areas, transportation is degrading the quality of urban life. Traffic congestion, air pollution, noise, blight, death, and destruction are just some of the adverse effects of our current transportation system. This course will examine the causes of these problems and some of the policy solutions that planners and others are attempting to implement. (Prereq grad student or adult special or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Fall Qtr, ★●Sec 1, Th, 7-9:30, HHCtr 25

**PA 5296 TOPICS: APPLIED URBAN GEOGRAPHIC INFORMATION SYSTEMS.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Introduction to the analysis and presentation of social and economic data utilizing computer mapping techniques. Topics are targeted towards the needs of students and professionals in the areas of public affairs and planning. Specifically, students learn how to use relational databases in conjunction with two GIS software packages to analyze the geographical aspects of local, regional, and national issues and trends. A final project entails the use of disparate data sources in the geographic

analysis and presentation of a public policy issue. (Prereq grad student or adult special or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Spring Qtr, ★●Sec 1, W, 6:15-8:45, Arr

**PA 5491 TOPICS: EDUCATION REFORM: Policy and Practice.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Minnesota has become a national leader in attempts to improve public education. This course is a topics course in the Humphrey Institute's Social Policy Concentration and will give students a broad introduction to the issues involved and strategies employed by those trying to have an impact at the state legislature on education policy. The course will include various viewpoints on Minnesota's public school choice legislation and proposals for greater parent input into the educational system. Students will talk with education reform activists and help produce a document discussing tactics employed by those trying to influence the Legislature. (Prereq grad student or adult special or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Fall Qtr, ★●Sec 1, M, 4:40-6:25, BlegH 260, Nathan

**PA 5592 TOPICS: STATE AND LOCAL ECONOMIC STRATEGIES WORKSHOP.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

While the role of state and local government in the economy is limited, public actions can be decisive in shaping the way a state and local economy adjusts to the competitive world economy. This course presents a comprehensive overview of state and local economic development strategies and the processes involved in developing a broadly conceived economic strategy for a state or local government. The course also will explore new institutional structures and processes required to deal with economic change, new political realities, and evolving knowledge. (Prereq grad student or adult special or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Spring Qtr, ★●Sec 1, Th, 6:15-8:45, HHCtr 30, Munnich

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\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**PA 5594 TOPICS: TOOLS AND TECHNIQUES OF COMMUNITY AND ECONOMIC DEVELOPMENT.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Examines the contexts and motivations behind economic development activities, alternative strategies available to communities to organize and initiate successful economic development projects, the range of tools and techniques to conduct economic development analysis and planning (including market analysis, feasibility studies, and investment analysis), and the different means available to implement economic development strategic plans. Integrates a review of the theories underlying economic development practice, the methods used to analyze and organize economic development, and case studies in practice. Introduces students to local practitioners and experts in the field and provides an opportunity for students to develop skills used in today's economic development practice. (Prereq grad student or adult special or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension Students)

Fall Qtr, ★●Sec 1, Th, 6:15-8:45, HHCtr 30, Campbell

**PA 5791 TOPICS: SCIENCE, TECHNOLOGY, AND INTERNATIONAL AFFAIRS.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Examines the ways in which science and technology in the closing decade of the 20th century are directly affecting the global economic, political, and social environment; and the consequent alterations in both the agenda for international negotiation and the practical approaches available to nations in pursuing their interests. Within this larger context, the specific choices for American foreign policy will be stressed. The subject will be approached on three levels: it will examine at the conceptual level how the dynamics of technological development and specific advances in science and technology affect relations among nations in such matters as autonomy, national security, distribution of power, cultural identity, and international cooperation; it will illustrate the conceptual issues with examples from the current international science; and it will consider the feasibility of various approaches to determining national policy and negotiating international agreements in areas affected by

these S&T considerations. (Prereq grad or adult spec or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Fall Qtr, ★●Sec 1, M, 6:15-8:45, HHCtr 25, Keller

**PA 5792 TOPICS: ENERGY REGULATION, ANALYSIS, AND ADVOCACY.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

The regulated utility industries are undergoing a radical transformation in modern societies. Technical change, increased competition, and regulatory reform are causing rapid evolution in how electric, telephone, and natural gas services are provided. The class will help prepare students to understand and participate in this changing regulatory climate as analysts, managers, activists, and advocates. There is a continuing need for individuals with both technical skills and a broad public affairs background to fill these roles in modern utility regulation. Environmental organizations, consumer advocates, business interests, and utilities themselves are all becoming more active in the regulatory arena. Regulatory agencies, in turn, are assuming new duties and dealing with new issues, and likewise need analysts and managers prepared to deal with the emerging nature of the industries. (Prereq grad student or adult special or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 25 Extension students)

Spring Qtr, ★●Sec 1, W, 6:15-8:45, Law 3, Corneli

**PA 5892 TOPICS IN FOREIGN POLICY: STRATEGIES FOR SUSTAINABLE DEVELOPMENT.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

How to sustain development of the global economy? How to make it environmentally sound and socially acceptable? What are strategies for developed and developing countries? Is global strategy possible? Is there any change in policy making processes and in the real world after Earth Summit '92? This course is designed to answer these questions by examining theoretical and practical aspects of economic development of the global economy. It focuses on economic, environmental, and institu-

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\* Tuition definitions of Resident and Non-resident explained on page 24.



tional aspects of sustainable development. The main concern is to give the student knowledge of the concept of sustainable development, its strategies, methods of implementation, and the most valuable applications in different economic systems of industrialized and developing countries. Course requirements include thoughtful class participation and a term paper. (Prereq grad student or adult special or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Spring Qtr, ★●Sec 1, M, 6:15-8:45, HHCtr 25, Bochniarz

**PA 5941-5942 SEMINAR: LEADERSHIP FOR THE COMMON GOOD.** 3 credits each quarter, tuition each quarter (includes \$353.50 special fee)\*; Resident Graduate School credit \$1000; Non-resident Graduate School credit \$1775.80.

Designed to advance participants' knowledge and understanding of the practice of leadership in pursuit of the common good. The various meanings of the common good are explored, including in relation to participants' own cases. The program explores the many kinds of leadership necessary to pursue the common good: personal, team, organizational, visionary, political, ethical, and policy. An emphasis is placed on building and experiencing a learning community. Presentations are made by Humphrey Institute faculty, outside experts, and the participants themselves. A variety of educational tools are used to link theory and practice. Designed for mid-career learners; participants must register for both quarters. *For a more detailed description of the seminar, call 626-7223 or 625-5888.* (Prereq written #. Must be taken for graduate credit or no-credit audit)

Winter Qtr, 5941, Sec 1, W, 5:30-8:30, HHCtr 215, Bryson, Crosby

Spring Qtr, 5942, Sec 1, W, 5:30-8:30, HHCtr 215, Bryson, Crosby

## Public Health (PubH)

(A302 Mayo: 624-6669)

### School of Public Health

Textbooks for most PubH courses are available at University of Minnesota Bookstore—Health Sciences (625-8600).

Mila Aroskar, Associate Professor, Health Management and Policy

Michael L. Austin, Lecturer, Environmental Health

Linda H. Bearinger, Assistant Professor, School of Nursing

Lisa M. Brosseau, Assistant Professor, Environmental Health

Edward Ehlinger, Adjunct Assistant Professor, Community Health Education

Maymie Eschwey, Lecturer, Maternal and Child Health

David Feinwachs, Adjunct Assistant Professor, Public Health Administration

Judith Garrard, Professor, Health Services Research

Ian A. Greaves, Associate Professor, Environmental Health

Robert L. Kane, Professor, Health Services Research

Rosalie A. Kane, Professor, Health Services Research

Ruth Ellen Luehr, Instructor, Maternal and Child Health

Nicole Lurie, Associate Professor, Health Services Research; Medical School

Michael Matthews, Assistant Professor, Cell Biology and Neuroanatomy

Elizabeth McIntosh, Lecturer, Maternal and Child Health

Gary W. Olmstead, Adjunct Assistant Professor, Environmental Health

Joan Patterson, Associate Professor, Maternal and Child Health

Michael D. Resnick, Associate Professor, Maternal and Child Health

Frank S. Rhame, Associate Professor, Epidemiology

James Rothenberger, Instructor, Community Health Education

Stanton Shanedling, Adjunct Assistant Professor, Maternal and Child Health

John M. Shutske, Adjunct Assistant Professor, Agricultural Engineering

Barbara A. Spradley, Associate Professor, Public Health Administration

Mary Story, Associate Professor, Public Health Nutrition

Robert ten Bonsel, Professor, Maternal and Child Health

Fay Thompson, Director, Environmental Health and Safety

Elizabeth Wattenberg, Assistant Professor, Environmental Health

J. Pamela Weiner, Instructor, Maternal and Child Health

John T. Wendt, Adjunct Assistant Professor, Environmental Health

John Yoakum, Lecturer, Maternal and Child Health

(See also Alcohol and Drug Counseling listing with Family Social Science; Health Science Units; General College; and Research Explorations)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in several Public Health categories. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

### Public Health Categories

#### Community Health Education (begins page 330)

- 3001 Personal and Community Health
- 3003 Fundamentals of Alcohol and Drug Abuse
- 5003 Fundamentals of Alcohol and Drug Abuse
- 5010 Public Health Approaches to AIDS
- 5022 Personal and Community Health
- 5040 Dying and Death in Contemporary Society

#### Environmental Health (begins page 331)

- 5150 Environmental Health Law I
- 5150 Environmental Health Law II
- 5151 Environmental Health
- 5192 Occupational Safety
- 5198 Safety Engineering Fundamentals
- 5253 Introduction: Hazardous Waste Management
- 5255 Hazardous Materials Management
- 5261 General Environmental Toxicology

#### Epidemiology (begins page 332)

- 3301/5301 Perspectives: Interrelationships of People and Animals in Society Today

#### Public Health Workshops (begins page 333)

- 5641 Violence Across the Life Cycle
- 5643 Sexual Abuse of Children
- 5650 Teenage Pregnancy and Parenting: Models for Intervention
- 5654 Adolescent Sexual Identity: Teen Risk and Professional Responsibility

#### Health Services Research and Policy (begins page 333)

- 5806 Principles of Public Health Research
- 5863 Quality Assurance
- 5868 Principles of Health Services Research
- 8803 Long-Term Care: Principles and Policies

#### Maternal and Child Health (begins page 334)

- 5610 Principles of Maternal and Child Health

- 5613 Chronic Illness and Childhood Disability
- 5616 Rights of Children and Youth: Abuse and Neglect
- 5622 Women's Health: Issues and Controversies
- 5639 Prevention: Theory, Practice, and Application in Public Health Services
- 5655 Sexual Orientation Issues for Adolescents

#### Public Health Administration (begins page 335)

- 5711 Public Health Law
- 5727 Health Leadership and Effecting Change
- 5734 Ethical Dimensions of Public Health
- 5737 Multidisciplinary Perspectives on Aging

#### Public Health Nutrition (begins page 336)

- 5935 Adolescent and Child Nutrition

#### Community health education

**PubH 3001 PERSONAL AND COMMUNITY HEALTH.** 3 credits, \$3004, tuition\*: Resident \$450; Non-resident \$990.

Fundamental principles of health conservation and disease prevention. (No prereq).

Winter Qtr, Sec 1, M, 7-9:30, MoosT 2-530, Ehlinger

**PubH 3003 FUNDAMENTALS OF ALCOHOL AND DRUG ABUSE.** 2 credits, \$3004, HSU 3003, 5032, tuition\*: Resident \$300; Non-resident \$660.

Lecture, discussion, and special readings on the scientific, socio-cultural, and attitudinal aspects of alcohol and other drug abuse problems, with special emphasis on incidence, prevalence, high risk populations, prevention and intervention. (No prereq. Meets concurrently with 5003, HSU 3003, 5032. A joint Day/Extension class)

Winter Qtr, Sec 1, Th, 4:40-6:40, MoosT 2-530, Rothenberger

**PubH 5003 FUNDAMENTALS OF ALCOHOL AND DRUG ABUSE.** 2 credits, \$PubH 5023, tuition\*: Resident \$300; Non-resident \$660; Resident Graduate credit \$300; Non-resident Graduate credit \$660; Resident Graduate School credit \$431; Non-resident Graduate School credit \$948.20.

See course description for PubH 3003. (Prereq education major or #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3003, HSU 3003, 5032. A joint Day/Extension class)

Winter Qtr, Sec 1, Th, 4:40-6:40, MoosT 2-530, Rothenberger

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**PubH 5010 PUBLIC HEALTH APPROACHES TO AIDS.** 3 credits, §HSU 5010, tuition\*: Resident \$450; Non-resident \$990; Resident Graduate credit \$450; Non-resident Graduate credit \$990; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

A survey of HIV infection from a public health perspective with emphasis on intervention. Topics include epidemiological and clinical features of HIV infection, the impact and response of affected communities and populations, and behavior change principles as they apply to communities, schools, and social policy. Community resources supplement lectures with case presentations. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with HSU 5010. A joint Day/Extension class)

Fall Qtr, ●Sec 1, W, 4:40-7:20, MoosT 2-620,

Rothenberger, Rhame

Spring Qtr, ●Sec 2, W, 4:40-7:20, MoosT 2-620,

Rothenberger, Rhame

(See also Anth 5920, Anthropology of AIDS)

**PubH 5022 PERSONAL AND COMMUNITY HEALTH.** 2 credits, §PubH 5023, tuition\*: Resident \$300; Non-resident \$660; Resident Graduate credit \$300; Non-resident Graduate credit \$660; Resident Graduate School credit \$431; Non-resident Graduate School credit \$948.20.

Fundamental principles of health conservation and disease prevention. (Prereq education major or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, ●Sec 1, Th, 4:30-6:30, MoosT 2-690,

Rothenberger

**PubH 5040 DYING AND DEATH IN CONTEMPORARY SOCIETY.** 3 credits, §HSU 5040, Mort 5040, tuition\*: Resident \$450; Non-resident \$990; Resident Graduate credit \$450; Non-resident Graduate credit \$990; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30. (IS)

Background information on concepts, attitudes, ethics, and lifestyle management related to dying, death, grief, and bereavement. Emphasis on preparing community health and helping professionals and educators for educational activities in this area. **Must be taken A-F.** (Prereq health science major, public health grad, education sr, mortuary science major or #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with HSU 5040 and MortS 5040. A joint Day/Extension class)

Winter Qtr, ●Sec 1, W, 4:40-7:20, MoosT 2-690,

Rothenberger, Matthews

### *Environmental health*

For information about the new Solid Waste Management Certificate offered through Continuing Education and Extension/University College, see page 530.

**PubH 5150 ENVIRONMENTAL HEALTH LAW I.** 3 credits, tuition\*: Resident \$450; Non-resident \$990; Resident Graduate credit \$450; Non-resident Graduate credit \$990; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Introduction to consumer and environmental health law. *Parens patriae* and the management of individual welfare and safety; tort; and consumer law. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 30)

Winter Qtr, ★Sec 1, T, 5:30-8:30, MoosT 2-580,

Austin, Wendt

**PubH 5150 ENVIRONMENTAL HEALTH LAW II.** 3 credits, tuition\*: Resident \$450; Non-resident \$990; Resident Graduate credit \$450; Non-resident Graduate credit \$990; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Introduction to occupational law and pollution law. Occupational law; worker protection; pollution law, real estate transaction; environmental law and regulation. (Prereq PubH 5150 sec 1. Qualified students may register for graduate credit at the University of Minnesota. Limited to 30)

Spring Qtr, ★Sec 2, T, 5:30-8:30, MoosT 2-580,

Austin, Wendt

**PubH 5151 ENVIRONMENTAL HEALTH.** 3 credits, tuition\*: Resident \$450; Non-resident \$990; Resident Graduate credit \$450; Non-resident Graduate credit \$990; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Methods for promoting human health and comfort by controlling the environment. (Prereq #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, ●Sec 1, T, 7-9:30, MoosT 2-520,

Greaves

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**PubH 5192 OCCUPATIONAL SAFETY.** 3 credits, tuition\*: Resident \$450; Non-resident \$990; Resident Graduate credit \$450; Non-resident Graduate credit \$990; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Provides information on the development of occupational safety programs essential to the health and safety of the worker and integral to public health in general. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr, Sec 1, M, 5:30-8:30, MoosT 2-520, Olmstead

**PubH 5198 SAFETY ENGINEERING FUNDAMENTALS.** 3 credits, tuition\*: Resident \$450; Non-resident \$990; Resident Graduate credit \$450; Non-resident Graduate credit \$990; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Fundamental safety engineering design and control principles applied to injury and property loss prevention. Standards; guarding; systems analysis; fire protection; legal/ethical considerations; and engineering controls for noise, vibration, electrical, and mechanical hazards. *Course will be offered only if there is an enrollment of 25 or more.* (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr, Sec 1, Th, 4-6:30, PWB 2470, Shutske

**PubH 5253 INTRODUCTION: HAZARDOUS WASTE MANAGEMENT.** 3 credits, tuition\*: Resident \$450; Non-resident \$990; Resident Graduate credit \$450; Non-resident Graduate credit \$990; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Review of roles of public and private sectors as generators, disposers, and regulators of hazardous wastes; includes definitions, sources, transportation, handling, treatment, recovery, disposal, and public health implications. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr, Sec 1, MW, 4-5:15, MoosT 2-520, Thompson

**PubH 5255 HAZARDOUS MATERIALS MANAGEMENT.** 3 credits, tuition\*: Resident \$450; Non-resident \$990; Resident Graduate credit \$450; Non-resident Graduate credit \$990; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Proper management and use of hazardous materials. Overview of regulations concerning process

safety, transport, air-water releases, hazard communication and emergency response. Chemical properties and toxicity of hazardous materials, personnel protection, and air sampling techniques also covered. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr, Sec 1, M, 4-7, Mayo 1250, Brosseau

**PubH 5261 GENERAL ENVIRONMENTAL TOXICOLOGY.** 3 credits, tuition\*: Resident \$450; Non-resident \$990; Resident Graduate credit \$450; Non-resident Graduate credit \$990; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Application of basic biochemical, and physiological principles; assessment of potential health hazards; approaches to solution of toxicological problems. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, Sec 1, TTh, 6-7:30, MoosT 2-530, Wattenberg

### *Epidemiology*

**PubH 3301 PERSPECTIVES: INTERRELATIONSHIPS OF PEOPLE AND ANIMALS IN SOCIETY TODAY.** 2 or 3 credits, §5301, 5303, 5304, §CVM 3100, tuition\* each credit: Resident \$150; Non-resident \$330.

Interrelationships of people and animals from several viewpoints. The social, economic, and health consequences of these relationships including issues such as pets and people sharing an urban environment, animal rights, and the influence of differences in cultures on animal-human relationships. (No prereq. Meets concurrently with 5301 and CVM 3100. A joint Day/Extension class)

Spring Qtr, Sec 1, T, 4-5:40, AnScVM 125, StP Campus

**PubH 5301 PERSPECTIVES: INTERRELATIONSHIPS OF PEOPLE AND ANIMALS IN SOCIETY TODAY.** 2 or 3 credits, §3301, 5303, 5304, §CVM 3100, tuition\* each credit: Resident \$150; Non-resident \$330; Resident Graduate credit \$150; Non-resident Graduate credit \$330; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

See description for PubH 3301. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3301 and CVM 3100. A joint Day/Extension class)

Spring Qtr, Sec 1, T, 4-5:40, AnScVM 125, StP Campus

\* Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

### *Public Health One-Day, One-Credit Workshops*

**Registration deadline:** Registrations must be received by the University at least 10 days prior to the date of the workshop.

**Late registration:** If space permits, late registrations accepted with \$5 late fee from 7:30 to 8 a.m.

**CEUs:** Continuing Education Units (CEUs) are not available.

**PubH 5641 VIOLENCE ACROSS THE LIFE CYCLE.** 1 credit, tuition\* (includes \$15 special fee): Resident \$165; Non-resident \$345; Resident Graduate credit \$165; Non-resident Graduate credit \$345; Resident Graduate School credit \$230.50; Non-resident Graduate School credit \$489.10.

Presentation of the latest theories and practice relative to intra-family violence across the life span. Following the ecological model, the course will cover fetal, child, adolescent, spouse, and elder abuse. Emphasis placed on prevention programs. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 60)

Spring Spec Term, ★Sec 2, Sa, 8 a.m.-4:30, Apr. 13, 1995, EBCEC 42, StP Campus, ten Bensel. *No late fee through Apr. 5*

**PubH 5643 SEXUAL ABUSE OF CHILDREN.** 1 credit, tuition\* (includes \$15 special fee): Resident \$165; Non-resident \$345; Resident Graduate credit \$165; Non-resident Graduate credit \$345; Resident Graduate School credit \$230.50; Non-resident Graduate School credit \$489.10.

Designed to acquaint professionals and community persons with the issues surrounding sexual abuse of children. Historical overview, definitions, dynamics, outcomes, treatment, and function of the school and community in the prevention of sexual abuse of children included. Offered via interactive television between two sites, with students at both locations. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 60)

Fall Spec Term, ★Sec 1, Sa, 8 a.m.-4:30, Oct. 7, EBCEC 42, StP Campus, ten Bensel. *No late fee through Sept. 30*

**PubH 5650 TEENAGE PREGNANCY AND PARENTING: MODELS FOR INTERVENTION.** 1 credit, tuition\* (includes \$15 special fee): Resident \$165; Non-resident \$345; Resident Graduate credit \$165; Non-resident Graduate credit \$345; Resident Graduate School credit \$230.50; Non-resident Graduate School credit \$489.10.

A course developed for health/social service providers and educators working with youth around issues of pregnancy, abortion, parenting, and adoption. It is a blend of theory and application, grounded in a model of adolescent development. It is designed to enhance understanding and skills for effectively addressing issues, counseling adolescents, and developing community-based programs for teenage pregnancy and parenting. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 60)

Fall Spec Term, ★Sec 1, Sa, 8 a.m.-4:30, Oct. 28, EBCEC 42, StP Campus, Resnick, Bearinger. *No late fee through Oct. 20*

**PubH 5654 ADOLESCENT SEXUAL IDENTITY: TEEN RISK AND PROFESSIONAL RESPONSIBILITY.** 1 credit, tuition\* (includes \$15 special fee): Resident \$165; Non-resident \$345; Resident Graduate credit \$165; Non-resident Graduate credit \$345; Resident Graduate School credit \$230.50; Non-resident Graduate School credit \$489.10.

Focuses on the issues gay, lesbian, and bisexual adolescents and their families face in coming to terms with sexual orientation. Includes helpful ways to work with this hidden population and their families. (Prereq B.A. or employment in education, health, or social service. Qualified students may register for graduate credit at the University of Minnesota. Limited to 90)

Fall Spec Term, ★Sec 1, Sa, 8 a.m.-4:30, Nov. 11, EBCEC 42, StP Campus, Yoakum. *No late fee through Nov. 3*

### *Health services research and policy*

**PubH 5806 PRINCIPLES OF PUBLIC HEALTH RESEARCH.** 3 credits, tuition\*: Resident \$450; Non-resident \$990; Resident Graduate credit \$450; Non-resident Graduate credit \$990; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Critical evaluation of public health research literature, planning of independent research projects, formulation of the research question, research design, sampling techniques, use of research concepts, and data analysis. Questionnaires, interviews and data analysis techniques. (Prereq #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, ○Sec 1, MW, 3:35-5:30, MoosT 2-650, Garrard

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**PubH 5863 QUALITY ASSURANCE.** 2 credits, tuition\*: Resident \$300; Non-resident \$660; Resident Graduate credit \$300; Non-resident Graduate credit \$660; Resident Graduate School credit \$431; Non-resident Graduate School credit \$948.20.

Examines the history of approaches to assessing and assuring quality of care. Special attention is devoted to recent activities around small area variation: outcomes, appropriateness, and effectiveness. Both the theory and specifics of alternative approaches and their interpretations are addressed. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr, ○Sec 1, W, 3:35-5:30, Mayo D330, Kane, Lurie

**PubH 5868 PRINCIPLES OF HEALTH SERVICES RESEARCH.** 3 credits, tuition\*: Resident \$450; Non-resident \$990; Resident Graduate credit \$450; Non-resident Graduate credit \$990; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Examines the disciplinary contributions to health services and traces how health services research can influence policy using a variety of best case examples to examine the breadth of health services research. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, ○Sec 1, W, 3:35-6:30, Mayo D326, Kane

**PubH 8803 LONG-TERM CARE: PRINCIPLES AND POLICIES.** 3 credits, tuition\*: Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Long-term care policy for functionally impaired persons, particularly the elderly. Team-taught from health care and social services perspective; grounded in research literature on evidence of program effects. Innovative programs addressing current disconnections. **Must be taken A-F.** (Prereq grad-level course in health care policy or #. Open only to students admitted to the University of Minnesota Graduate School. A joint Day/Extension class)

Spring Qtr, ○Sec 1, M, 3:35-6, Mayo D330, R A Kane

### *Maternal and child health*

(See also Child Psychology; Child and Adolescent Psychiatry; and Youth Studies)

**PubH 5610 PRINCIPLES OF MATERNAL AND CHILD HEALTH.** 3 credits, tuition\*: Resident \$450; Non-resident \$990; Resident Graduate credit \$450; Non-resident Graduate credit \$990; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

For those who work or plan to work in programs which deliver services to families. Introduction to maternal and child health with emphasis on terminology, principles, and concepts of primary care, health maintenance, preventive care, organization, and evaluation. (Prereq public health or grad student or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 100 Extension students)

Fall Qtr, ★○Sec 1, Th, 4:40-7:10, MoosT 2-620, ten Bensel

**PubH 5613 CHRONIC ILLNESS AND CHILDHOOD DISABILITY.** 3 credits, tuition\*: Resident \$450; Non-resident \$990; Resident Graduate credit \$450; Non-resident Graduate credit \$990; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

(Prereq public health or grad student or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr, ○Sec 1, T, 4:40-7:10, Mayo D325, Patterson

**PubH 5616 RIGHTS OF CHILDREN AND YOUTH: ABUSE AND NEGLECT.** 4 credits. §HSU 5019, tuition\*: Resident \$600; Non-resident \$1320; Resident Graduate credit \$600; Non-resident Graduate credit \$1320; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40. (IS 5642)

A learning experience on needs and rights of children and parents and with the neglect and abuse of children. Historical and legal aspects, identification and reporting procedures, family assessment and treatment modalities, follow-up processes, research, prevention and the implications for societal action. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 100 Extension students)

Winter Qtr, ★○Sec 1, MW, 4-5:45, MoosT 2-620, ten Bensel

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**PubH 5622 WOMEN'S HEALTH: ISSUES AND CONTROVERSIES.** 4 credits, tuition\*: Resident \$600; Non-resident \$1320; Resident Graduate credit \$600; Non-resident Graduate credit \$1320; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Issues and controversies affecting women's health care from a historical perspective and public health vantage point. Contrasts methods of health care delivery, professional and consumer education, and addresses current literature. Includes specific health needs of underserved women in the population. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 40) Spring Qtr, ★Sec 1, Th, 5:45-9:05, Mayo A367, Weiner

(See also Women's Studies)

**PubH 5637 SEMINAR: CROSS-CULTURAL HEALTH ISSUES IN MINNESOTA.** 3 credits. Tentatively scheduled for Fall 1996.

**PubH 5639 PREVENTION: THEORY, PRACTICE AND APPLICATION IN PUBLIC HEALTH SERVICES.** 4 credits, tuition\*: Resident \$600; Non-resident \$1320; Resident Graduate credit \$600; Non-resident Graduate credit \$1320; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Designed for students (undergraduate, graduate, or continuing education) and professionals in health and related disciplines who wish to explore the current issues and controversies centered around the idea of prevention and how it relates to the health services. Emphasis will be on history, prevention as an idea, terminology, lifestyle intervention, programs and legislative issues, education, roles and the implications for societal action. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 40) Winter Qtr, ★Sec 1, T, 4:15-7, Mayo A367, Shanedling

**PubH 5655 SEXUAL ORIENTATION ISSUES FOR ADOLESCENTS.** 3 credits, tuition\*: Resident \$450; Non-resident \$990; Resident Graduate credit \$450; Non-resident Graduate credit \$990; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

An intensive course exploring adolescent sexuality and sexual orientation from the perspective of individual identity, impact of the community, and response of youth-serving professionals toward gay/lesbian/bisexual youth and their families. (Prereq B.A. or employment in education, health, or social service. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr, Sec 1, Th, 4-7, Mayo A270, Luehr, Yoakum

### *Public health administration*

**PubH 5711 PUBLIC HEALTH LAW.** 4 credits, tuition\*: Resident \$600; Non-resident \$1320; Resident Graduate credit \$600; Non-resident Graduate credit \$1320; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Introductory course. 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 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10)

Spring Qtr, ★Sec 1, M, 4:40-7:25, Mayo D326, Feinwachs

**PubH 5727 HEALTH LEADERSHIP AND EFFECTING CHANGE.** 3 credits, \$HSU 5007, tuition\*: Resident \$450; Non-resident \$990; Resident Graduate credit \$450; Non-resident Graduate credit \$990; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Application of a broad theoretical base in planned change to solve managerial and organizational problems in students' roles as leaders in the health professions. (Prereq PubH grad or written #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with HSU 5007. A joint Day/Extension class limited to 5 Extension students)

Winter Qtr, ★Sec 1, W, 4:40-7:25, Mayo D326, Spradley

**PubH 5734 (formerly 5516) ETHICAL DIMENSIONS OF PUBLIC HEALTH.** 1 credit, \$5516, tuition\*: Resident \$150; Non-resident \$330; Resident Graduate credit \$150; Non-resident Graduate credit \$330; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Examination of ethical issues and dilemmas that confront public health professionals and agencies with discussion of how ethical/value aspects interface with political, legal, economic, and cultural considerations. **Must be taken S-N.** (Prereq grad student or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 8 Extension students)

Spring Spec Term, ★Sec 1, T, 3:35-5:30, Mar. 26, Apr. 2, 16, 23, 30, Mayo D326, Aroskar

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**PubH 5737 (formerly 5520) MULTI-DISCIPLINARY PERSPECTIVES ON AGING.** 4 credits, §AdEd 5440, §CPsy 5385, §HSU 5009, §Phar 5009, §PubH 5520, §PA 5414, §SW 5024, §Soc 5960, tuition\*: Resident \$600; Non-resident \$1320; Resident Graduate credit \$600; Non-resident Graduate credit \$1320; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Sociological, biological, psychological aspects of aging; theories of aging; death and bereavement; issues and problems of older adults in America; human services and their delivery systems (health, nutrition, long-term care, education; public policy and legislation; environment and housing; retirement). *Students who want graduate credit should register for one of the following: AdEd 5440, CPsy 5305, Nurs 5780, PA 5414, PubH 5737, SW 5024, or Soc 5960. Students who want undergraduate credit should register for Phar 5009 or HSU 5009.* (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with AdEd 5440, CPsy 5305, HSU 5009, Nurs 5780, Phar 5009, PA 5414, SW 5024, Soc 5960. A joint Day/Extension class)  
Fall Qtr, ●Sec 1, MW, 4:40-6:25, MoosT 2-690,  
R A Kane, AUCA Faculty  
Spring Qtr, ●Sec 2, MW, 4:40-6:25, MoosT  
2-690, AUCA Faculty

(See also GC 1136, Biological Aspects of Aging)

### Public health nutrition

**PubH 5935 CHILD AND ADOLESCENT NUTRITION.** 3 credits, tuition\*: Resident \$450; Non-resident \$990; Resident Graduate credit \$450; Non-resident Graduate credit \$990; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Explores current issues and literature in childhood and adolescent nutrition. Emphasis on major nutrition issues of youth; biological, cultural, psychosocial factors influencing food behaviors; and strategies for improving nutritional health of children and teenagers. (Prereq grad-level student or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr, ●Sec 1, T, 3:35-6:35, Mayo A367,  
Story

## Public Policy

(See courses in Public Affairs, History, Compleat Scholar noncredit courses, and Political Science)

## Real Estate

Real Estate courses, formerly offered by the University, were transferred to the Minnesota Center for Real Estate and Housing Education, College of Business, St. Cloud State University, and courses held in the University Technology Center, 1313 Fifth Street S.E., Minneapolis, MN 55414.

For current information, call (612) 379-3891.

(See related courses in Architecture; Business Law; Finance; Geography; Housing; Public Affairs)

## Recreation, Park, and Leisure Studies (Rec)

(224 Cooke Hall: 625-5300)

**College of Education and Human Development**  
(School of Kinesiology and Leisure Studies)

Textbooks for most Rec courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

Bruce D. Anderson, Associate Professor  
Mary Jo Kane, Associate Professor  
Leo McAvoy, Jr., Professor  
Stuart J. Schleien, Professor  
John Schultz, Associate Professor  
Carla Tabourne, Assistant Professor

**Sports Management**—The School of Kinesiology and Leisure Studies offers a certificate in Sports Management through Continuing Education and Extension/University College. For information, call (612) 625-5300.

**Rec 5100 FOUNDATIONS OF RECREATION.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Investigation of the historical, sociological, and educational bases of the recreative use of leisure time in contemporary society. **Must be taken A-F.** (Prereq MEd, adult special, or grad student. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 20 Extension students)

Fall Qtr, ★●Sec 1, M, 6:40-8:40, CookeH 215,  
Schultz

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



**Rec 5111 SPORT FACILITIES.** 3 credits, §Kin 5111, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Planning of areas and facilities for athletics, physical education, and sport with special emphasis on current trends and problems in the field. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with Kin 5111. A joint Day/Extension class limited to a combined total of 15 Extension students)

Winter Qtr, ★○Sec 1, T, 4:15-6:30, CookeH 215, Anderson

**Rec 5210 INTRODUCTION TO THERAPEUTIC RECREATION.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Relationship of recreation to special populations, milieu and interdisciplinary approaches in the delivery of services. **Must be taken A-F.** (Prereq 1520 or ¶5100, recreation major or Δ. Grad and MEd students only. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension students)

Fall Qtr, ★○Sec 1, M, 4:15-6:30, CookeH 206, Tabourne

**Rec 5220 THERAPEUTIC RECREATION SERVICES.** 5 credits, tuition\*: Resident \$467.50; Non-resident \$1355.75; Resident Graduate credit \$590; Non-resident Graduate credit \$1298; Resident Graduate School credit \$1077.50; Non-resident Graduate School credit \$2370.50.

Recreation services for the ill, disabled, and other special populations. **Must be taken A-F.** (Prereq 5210 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension students)

Winter Qtr, ★○Sec 1, TTh, 4:15-6:30, CookeH 214, 215, Tabourne

**Rec 5230 RECREATION AND PERSONS WITH DEVELOPMENTAL DISABILITIES.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Issues relating to leisure services for persons with

mental retardation problems; approaches to programming in the institution and in the community. **Must be taken A-F.** (Prereq 5210 or Δ. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension students)

Fall Qtr, ★○Sec 1, T, 4:15-7:30, CookeH 206, Schleien

**Rec 5270 COMMUNITY LEISURE SERVICES AND PERSONS WITH DISABILITIES.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Exploration and application of concepts and techniques of normalization and inclusion strategies to leisure service delivery in community settings for a range of individuals with disabilities. **Must be taken A-F.** (Prereq 1520, Rec and Park major or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension students)

Spring Qtr, ★○Sec 1, T, 4:15-7:30, CookeH 214, 215, Schleien

**Rec 5288 GRANT WRITING IN HUMAN SERVICES.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Strategies in identifying, developing, and procuring financial assistance including proposal preparation for private foundations and governmental agencies. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension students)

Winter Qtr, ★○Sec 1, M, 5:30-9, CookeH 214, 215, Schleien

**Rec 5300 ADVENTURE EDUCATION.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Investigation of the philosophical, historical, and educational foundations of outdoor education. **Must be taken A-F.** (Prereq sr, 1520 or 5100 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Fall Qtr, ★○Sec 1, W, 4:30-7, CookeH 400, McAvoy

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Rec 5310 PROGRAMMING OUTDOOR AND ENVIRONMENTAL EDUCATION.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Methods, materials, and settings appropriate for developing and conducting outdoor education and environmental interpretation programs; emphasis on development of practical skills. **Must be taken A-F.** (Prereq 5300 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Spring Qtr, ★●Sec 1, Th, 4:15-7:30 (plus weekend field trip arr), CookeH 206, McAvoy

**Rec 5350 WILDERNESS OUTDOOR RECREATION PROGRAMMING.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Exploration of leisure and educational resources of wilderness and management of wilderness-based outdoor recreation and outdoor education programs. **Must be taken A-F.** (Prereq 3150 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Winter Qtr, ★●Sec 1, Th, 4:30-7:30 (plus 1 weekend field trip arr), CookeH 215, McAvoy

**Rec 5455 RECREATIONAL SPORTS.** 3 credits, \$PE 5255, \$Rec 5455, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Recreational sports programming, an in-depth analysis of recreational sports, its foundations, programs, and operational considerations. **Must be taken A-F.** (No prereq. Meets concurrently with Kin 5255. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Spring Qtr, ★●Sec 1, M, 4:15-6:30, CookeH 206, Anderson

**Rec 5900 CONTEMPORARY ISSUES IN LEISURE SERVICES: SPORTS FACILITY MANAGEMENT.** (12 cr max) 3 credits this offering, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Exploration, examination, and development of strategies in sport facility management. **Must be taken A-F.** (Prereq #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension students)

Fall Qtr, ★●Sec 1, M, 4:15-6:30, CookeH 214, Anderson

**Rec 5980 RESEARCH METHODOLOGY.** 3 credits, \$Kin 5980, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Methods and design for research in health, kinesiology, and recreation. **Must be taken A-F.** (Prereq education or grad student. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with Kin 5980. A joint Day/Extension class limited to 10 Extension students)

Fall Qtr, ★●Sec 1, Th, 4:15-6:45, CookeH 214, 215, Kane

**Rec 5981 PROBLEMS.** Credit arr. Tuition\* per credit: Resident \$93.50; Non-resident \$271.15; Resident Graduate credit \$118; Non-resident Graduate credit \$259.60; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Focus on conduct of recreation programs. **Must be taken A-F.** (Prereq Med or MA student or Δ. Qualified students may register for graduate credit at the University of Minnesota. Limited to 20)

Fall Qtr, ★Sec 1, Arr, McAvoy

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**Religious Studies (ReIS)**

(330 Folwell Hall: 625-5353)

**College of Liberal Arts**

Textbooks for most ReIS courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

(See also Classical and Near Eastern Studies; Anth 3131, Religion and Culture; Psy 3911, Psychology of Religion; Compleat Scholar noncredit courses; and Philosophy)

Teirab AshShareef, Assistant Professor of Afro-American and Middle Eastern Languages and Cultures

V. Elving Anderson, Adjunct Professor

Caesar E. Farah, Professor of History

Patricia A. Darling, Lecturer

Stephen Feinstein, Visiting Professor of Classical and Near Eastern Studies

Indira Junghare, Professor of South Asian and Middle Eastern Studies

William Malandra, Associate Professor of Classical and Near Eastern Studies

Daniel Reisman, Associate Professor of Classical and Near Eastern Studies

David Shupe, Lecturer

Robert B. Tapp, Professor of Humanities and Religious Studies

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Religious Studies. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**ReIS 1001 INTRODUCTION TO RELIGIOUS STUDIES.** 4 credits, §5001, tuition\*: Resident \$318; Non-resident \$922.20.

Individual and social religious behavior; methodologies for studying it; emergence of modern religious studies. Theistic Western religions (Judaism, Christianity, Islam) and nontheistic Buddhism. (No prereq)

Fall Qtr, Sec 1, T, 6:20-8:50, FolH 104, Malandra

**ReIS 1031 INTRODUCTION TO THE RELIGIONS OF SOUTH ASIA.** 4 credits, §ReIS 3031, 5031, §SALC 1504, 3031, 5031, tuition\*: Resident \$318; Non-resident \$922.20. (IS)

Introduction to Hinduism, Buddhism, and Jainism. (No prereq. Meets concurrently with SALC 1504)

Winter Qtr, Sec 1, T, 6:20-8:50, FolH 104, Malandra

**ReIS 1034 INTRODUCTION TO JUDAISM.** 4 credits, §3034, §JwSt 1034, 3034, tuition\*: Resident \$318; Non-resident \$922.20.

Concepts, movements, and institutions in the development of classical Judaism, as manifested in the literature and festivals of the Jewish people from Second Commonwealth times to present. (No prereq. Meets concurrently with 3034, JwSt 1034, 3034)

Winter Qtr, Sec 1, M, 6:20-8:50, FolH 218

**ReIS 1035 CHRISTIAN RELIGIOUS TRADITIONS.** 4 credits, §3035, §5035, tuition\*: Resident \$318; Non-resident \$922.20.

Historical structures, themes, and persons examined in Christianity's transition from minor Jewish sect to martyrdom to dominant religion to modern pluralism. (No prereq. Meets concurrently with 3035)

Winter Qtr, Sec 1, W, 6:20-8:50, FolH 104, Tapp

(See also CSch 0178, Distinctive Twin Cities Religious Architecture)

**ReIS 1036 THE RELIGION OF ISLAM.** 4 credit, §Arab 3036, §MELC 1536, 3036, tuition\*: Resident \$318; Non-resident \$922.20.

Evolution of Islam in historical context; institutions that made for diversity and continuity; traditions, laws, and observances of the faith; sectarian movements; philosophical and theological trends; modern developments; reformist, revolutionary, and militant. (No prereq. Meets concurrently with Arab 3036 and MELC 3036. Limited to a combined total of 40)

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

**ReIS 3034 INTRODUCTION TO JUDAISM.** 4 credits, §1034, §JwSt 1034, 3034, tuition\*: Resident \$344; Non-resident \$997.60. (IS)

See course description for ReIS 1034. (No prereq. Meets concurrently with 1034, JwSt 1034, 3034)

Winter Qtr, Sec 1, M, 6:20-8:50, FolH 218

**ReIS 3035 CHRISTIAN RELIGIOUS TRADITIONS.** 4 credits, §1035, §5035, tuition\*: Resident \$344; Non-resident \$997.60.

See course description for ReIS 1035. (No prereq. Meets concurrently with 1035)

Winter Qtr, Sec 1, W, 6:20-8:50, FolH 104, Tapp

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**ReIS 3072 THE NEW TESTAMENT.** 4 credits, §5072, §Clas 3072, 5072, tuition\*: Resident \$344; Non-resident \$997.60.

First century Israel under Roman rule. Jesus of Nazareth. Earliest Christian communities. Jewish Christianity. Mission to Gentiles. Paul the apostle. Beginnings of the New Testament. (No prereq. Meets concurrently with Clas 3072)

Spring Qtr, Sec 1, Th, 6:20-8:50, FolH 306

(See also CSch 0358, Ancient Mysteries of the Bible)

**ReIS 3213 QUR'AN AS LITERATURE.** 4 credits, §Arab 3212, MELC 3213, tuition\*: Resident \$344; Non-resident \$997.60.

Texts and commentaries in translation. Knowledge of Arabic not required. (No prereq. Meets concurrently with Arab 3213, MELC 3213. Limited to a combined total of 30)

Winter Qtr, ★Sec 1, M, 4:15-7, BlegH 205, AshShareef

Spring Qtr, ★Sec 2, M, 4:15-7, BlegH 205, AshShareef

**ReIS 3251 THE MODERN STUDY OF THE OLD TESTAMENT.** 4 credits, §ANE 3251, §RelA 3251, tuition\*: Resident \$344; Non-resident \$997.60.

Methods used in studying the Old Testament, including textual criticism, the anthropological approach, form criticism, the sociological approach, the history of religion, and the uses of archaeology in interpreting the text. (No prereq. Meets concurrently with ANE 3251)

Spring Qtr, Sec 1, T, 6:20-8:50, FolH 208, Reisman

**ReIS 3412 HINDUISM.** 4 credits, §ReIS 5412, §SALC 3412, 5412, tuition\*: Resident \$344; Non-resident \$997.60.

Development of Hinduism, focusing on sectarian trends, modern religious practices, myths and rituals, pilgrimage patterns and religious festivals, and the interrelationship of Indian social structure and Hinduism. (Prereq MELC 1504 or SALC 3411 or ReIS 1031 or #. Meets concurrently with 5412, SALC 3412, 5412. Limited to 25)

Fall Qtr, ★Sec 1, W, 6:20-8:50, FolH 50, Junghare

**ReIS 3413 BUDDHISM.** 4 credits, §ReIS 5413, §SALC 3413, 5413, tuition\*: Resident \$344; Non-resident \$997.60.

Historical account of the Buddhist religion in terms of its rise, development, various schools and common philosophical concept. Focuses on Indian Buddhism, compares it with Hinduism, and discusses its demise and revival on the Indian subcontinent. (No prereq. Meets concurrently with 5413, SALC 3413, 5413. Limited to 25)

Spring Qtr, ★Sec 1, W, 6:20-8:50, FolH 50, Junghare

**ReIS 3414 COMPARATIVE RELIGIONS OF SOUTH ASIA.** 4 credits, §5414, §SALC 3414, 5414, tuition\*: Resident \$344; Non-resident \$997.60.

Compares and contrasts basic philosophical concepts, literatures, ideologies, and ritualistic practices of Hinduism, Buddhism, and Jainism with those of Islam and Sikhism. (No prereq. ReIS 3412 and ReIS 3414 recommended. Meets concurrently with 5414, SALC 3414, 5414. Limited to 20)

Winter Qtr, ★Sec 1, W, 6:20-8:50, FolH 50, Junghare

**ReIS 3505 ANCIENT ISRAEL: THE HELLENISTIC PERIOD.** 4 credits, §5505, §ANE 3505, 5505, RelA 3505, 5505, tuition\*: Resident \$344; Non-resident \$997.60.

Period of Ezra and Nehemiah, Samaritans, apocalyptic and other eschatological types; the Maccabean period; Sadducees, Pharisees, Zealots, Christians, Qumran, wisdom literature; Philo, Josephus; Jewish rights during Roman empire. Evaluation of sources for historical reliability. Knowledge of Hebrew not required. (No prereq. Meets concurrently with ANE 3505)

Spring Qtr, Sec 1, M, 6:20-8:50, FolH 208

**ReIS 3541 THE HOLOCAUST.** 4 credits, §JwSt 3521, tuition\*: Resident \$344; Non-resident \$997.60.

Nazi destruction of Jewish life in Europe, 1933-45. Historical, social background of European Jewish communities. Anti-Semitism and Nazism. Ghettos under Nazi rule; social and cultural organization, government. Nazi terror and destruction; Jewish resistance; historical consequences; moral and philosophical implications. (No prereq. Meets concurrently with JwSt 3521)

Fall Qtr, Sec 1, M, 6:20-8:50, FolH 148, Feinstein

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**ReIS 3960 AMERICAN INDIAN RELIGIONS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Explores the various tribal traditions that comprise Native American religions of North America. After surveying historical backgrounds and major cultural traditions, the course examines religious responses of Native Americans to emerging European pressures. Contemporary native American traditions will be considered through literature, philosophy, art, ceremony, song, healing, arts, film, and discussions with guest speakers. (No prereq)  
Fall Qtr, Sec 1, W, 6:20-8:50, FordH 150, Darling

**ReIS 3960 ORDER AND CHAOS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

The victory of order over chaos is one of the oldest mythic themes known. In modern times this contest reappears as disagreement over the value given to systemic thought and reason (whether religious doctrine or scientific theory and explanation) versus the value given to all the complex aspects of existence which do not conform to traditional perspectives or theoretical explanations. Social science and the academic study of religion are primarily based on 19th-century approaches to describing and explaining human behavior—approaches which generally eliminate “chaotic” human activity from consideration. This course reviews 20th-century ideas concerning the human need for understanding and the importance of theory and explanation. It also examines several 20th-century intellectual attempts—within natural science (chaos theory), social science, psychology, and literature—which seek more thoroughly to acknowledge the reality and importance of chaos. Specifically examined is how understanding of human experience changes when both theoretical perspectives and that which calls theoretical perspectives into question are taken into account. (No prereq)

Winter Qtr, Sec 2, M, 6:20-8:50, FolH 104, Shupe

**ReIS 3960 RELIGION IN AN AGE OF SCIENCE.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Science and technology appear to challenge the place of religion in popular thought and scholarly discourse. Yet science and religion may have more in common than is often supposed. Compares and contrasts science and religion in their use of models, metaphors, and paradigms as well as in their methods and limits. Some attention given to differences among major religions. Specific topics include the origin of the universe, the origin of life, and views of human nature. (No prereq)

Spring Qtr, Sec 3, M, 6:20-8:50, FordH 40, Anderson

**ReIS 3960 MARGINS AND MAINSTREAMS: NEW RELIGIOUS MOVEMENTS IN THE U.S.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

The U.S. has been fertile ground for religious experimentation from its inception. This course surveys the innovative groups of the 18th and 19th centuries together with contemporary movements and includes an introduction to sociological theory of religion concerning churches, denominations, sects, cults, and emerging religions. Historical examples include Shakers, Mormons, occult and metaphysical movements, Seventh Day Adventists, Christian Science, and Father Divine Movement. Contemporary examples include Nation of Islam, Unification Church, Hindu and Buddhist sects, Evangelical, Pentecostal and Fundamentalist groups, neo-Pagans, WICCA, and New Age groups. (No prereq)

Spring Qtr, Sec 4, Th, 6:20-8:50, FordH 160, Darling

(See also CSch 0380, Crisis Theology: God Against Religion)

**ReIS 5412 HINDUISM.** 4 credits, \$ReIS 3412, \$SoAS 3412, 5412, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

See course description for ReIS 3412. (Prereq MELC 1504 or SALC 3411 or ReIS 1031 or #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3412, SALC 3412, 5412. Limited to 10)

Fall Qtr, ★Sec 1, W, 6:20-8:50, FolH 50, Junghare

**ReIS 5413 BUDDHISM.** 4 credits, \$ReIS 3413, \$SALC 3413, 5413, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

See course description for ReIS 3413. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3413, SALC 3413, 5413. Limited to 10)

Spring Qtr, ★Sec 1, W, 6:20-8:50, FolH 50, Junghare

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**ReIS 5414 COMPARATIVE RELIGIONS OF SOUTH ASIA.** 4 credits, §3414, §SALC 3414, 5414, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

See description for ReIS 3414. (No prereq. SALC 3412 and 3413 recommended. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3414, SALC 3414, 5414. Limited to 10)

Winter Qtr, ★Sec 1, W, 6:20-8:50, FolH 50, Junghare

## Research Explorations

(See page 474)

## Rhetoric (Rhet)

(201 Haecker Hall: 624-3445)

### College of Agricultural, Food, and Environmental Sciences

(Scientific and Technical Communication Program)

Textbooks for Rhet courses on the Minneapolis campus and at neighborhood centers are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000); at University of Minnesota Bookstore—St. Paul (624-9200) for classes on that campus.

(See also Learning and Academic Skills; General College; English; Composition and Communication; Compleat and Practical Scholar noncredit courses; and other study helps, page 492)

Sandra J. Becker, Professor  
J. Michael Bennett, Associate Professor  
Earl E. McDowell, Professor  
Victoria Mikelonis-Paraskov, Professor  
L. David Schuelke, Professor  
John M. Sperbeck, Associate Professor, College of Agricultural, Food, and Environmental Sciences

**Joint Day/Extension Classes**—You may register through Extension for most day school classes scheduled before 4 p.m. in Rhetoric. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**Rhet 1151 WRITING IN YOUR MAJOR.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Students investigate and write about subjects related to their majors. Emphasis on gathering, evaluating, synthesizing, and summarizing information; adapting it for various audiences. Assignments include literature review, abstract, fact sheet, instructions, and feature article. Computer-assisted instruction. **Must be taken A-F.** (Prereq 1104, completion of freshman communication requirement, sophomore. Limited to 20)

Winter Qtr, ★Sec 1, Th, 6:20-8:50, ClaOff 17, StP Campus

Spring Qtr, ★Sec 2, Th, 6:20-8:50, ClaOff 17, StP Campus

**Rhet 1222 PUBLIC SPEAKING.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Practical course in fundamentals of effective speechmaking. Emphasis on researching and organizing a speech and communicating with an audience. **Must be taken A-F.** (Prereq freshman communication requirement. Limited to 20)

Fall Qtr, ★Sec 1, T, 6:20-9:40, CentLib 6, StP Campus

Winter Qtr, ★Sec 2, W, 6:20-9:40, CentLib 6, StP Campus

Spring Qtr, ★Sec 3, W, 6:20-9:40, CentLib 6, StP Campus, Bennett

(See also Speech-Communication)

**Rhet 1441 COLLEGE READING AND LEARNING SKILLS.** 4 credits, tuition\* (includes \$3 course fee): Resident \$321; Non-resident \$925.20. (IS)

Lecture, and individual and small group practice in developing speed, comprehension, retention, and flexibility in reading college assignments; clarity and precision in writing; accurate and effective listening; control of communication-related anxiety, including test taking; vocabulary. A suggested follow-up for LASK 1001, Becoming a Master Student. (No prereq)

Winter Qtr, Sec 1, W, 6:20-9:40, FordH 120, Bennett

(See also PSch 0635, Better Reading: Gaining Speed and Comprehension)

**Rhet 3254 ADVANCED PUBLIC SPEAKING.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60.

Training for specific speech situations most likely to be encountered professionally. Emphasis on analysis, design, preparation, and delivery of presentations to provide greater flexibility within a variety of speech environments. (Prereq 1222. Limited to 18)

Fall Qtr, ★Sec 1, W, 6:20-9:40, CentLib 6, StP Campus, Bennett

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**Rhet 3562 WRITING IN YOUR PROFESSION.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60. (IS)

Projects in writing professional reports. Analyses of audience and situation; writing effectively to meet the needs of particular readers. Assignments include writing instructions, feasibility reports, proposals, memorandums, letters of application, and resumés. Sections 3 and 6 have computer-assisted instruction. **Must be taken A-F.** (Prereq freshman communication requirement, 1151, junior status. Limited to 22)

Fall Qtr, ★Sec 1, T, 6:20-8:50, HckrH 302, StP Campus, Becker

Fall Qtr, ★Sec 2, W, 6:20-8:50, HckrH 302, StP Campus

Winter Qtr, ★Sec 3, M, 6:20-8:50, ClaOff 17, StP Campus (Limited to 20)

Winter Qtr, ★Sec 4, T, 6:20-8:50, HckrH 312, StP Campus, Becker

Spring Qtr, ★Sec 5, T, 6:20-8:50, HckrH 302, StP Campus, Becker

Spring Qtr, ★Sec 6, W, 6:20-8:50, ClaOff 17, StP Campus (Limited to 20)

**Rhet 3565 WRITING FOR PUBLICATION.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60.

Writing and preparing manuscripts for publication; adaptation to specialized and general reader; professional, trade, and general publications; information sources and topic selection; marketing techniques. This course has computer-assisted instruction. (Prereq 3562, #. Limited to 20)

Winter Qtr, ★Sec 1, T, 5:30-8, ClaOff 17, StP Campus, Sperbeck

(See also writing courses in Compleat Scholar non-credit section)

**Rhet 3572 PROCEDURES AND POLICIES MANUAL.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45.

Problem analysis, process management, gathering information, writing procedures, verification, constructing the finished manual. (Prereq STC major or pre-STC, freshman communication requirement, 3562 or #. A joint Day/Extension class limited to 7 Extension students)

Spring Qtr, ★Sec 1, W, 4:05-6:25, HckrH 312, StP Campus

**Rhet 5165 STUDIES IN ORGANIZATIONAL COMMUNICATION, CONFLICT, AND CHANGE.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Roles of internal and external organizational communication, conflict-problem identification, and change processes. Contemporary theory and research in organizational development. Methods of problem identification and diagnosis. Change processes and applications to actual organizational settings. (Prereq freshman communications requirement or equivalent or grad status. Qualified students may register for graduate credit at the University of Minnesota. Limited to 20)

Fall Qtr, ★Sec 1, W, 6:20-9:40, HckrH 209, StP Campus, Schuelke

**Rhet 5258 INTERVIEWING: DYNAMICS OF FACE-TO-FACE COMMUNICATION.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Improves intrapersonal and interpersonal skills in interviewing situations. Students learn to understand and use appraisal, reprimand, complaint, persuasion, problem-solving, and counseling interview techniques and participate in a research interview project. Equal emphasis on the interviewer and interviewee roles. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 20)

Fall Qtr, ★Sec 1, T, 6:20-9:40, HckrH 222, StP Campus, McDowell

Winter Qtr, ★Sec 2, W, 6:20-9:40, HckrH 222, StP Campus, McDowell

Spring Qtr, ★Sec 3, Th, 6:20-9:40, HckrH 222, StP Campus, McDowell

(See also Spch 5422, Interviewing and Communication)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Rhet 5500 RESEARCH IN COMMUNICATION STRATEGIES.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Fundamental terminology of descriptive and experimental research, communication research, questionnaire techniques, interviewing techniques, survey and experimental designs, the steps in organizing and conducting field and empirical research, and basic statistical and computer techniques. Emphasis on application of various research methods to particular communication strategies or settings. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension students)

Spring Qtr, ★Sec 1, M, 5-8:20, HckrH 222, StP Campus, McDowell

**Rhet 5560 EDITING FOR TECHNICAL COMMUNICATION.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Editorial process; editor-writer relationship; copy editing; preparing scientific and technical documents; handling format, visuals, and quantitative materials. **Must be taken A-F.** (Prereq: STC premajor or major or grad. Qualified students may register for graduate credit at the University of Minnesota. Limited to 20)

Spring Qtr, ★Sec 1, T, 6-9:20, HckrH 209, StP Campus, Mikelonis-Paraskov

(See also CSch 0436, Introduction to Copyediting)

**Rhet 5600 TRANSFER OF TECHNOLOGY.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Methods of transferring scientific and technical knowledge and practice. Review of research in diffusion and transfer methods at different technical levels. Tools, methodologies, and assessment procedures for managing a program. Assessment and design plan. (Prereq: sci comm work experience or #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 20)

Spring Qtr, ★Sec 1, W, 6:20-9:40, HckrH 209, StP Campus, Schuelke

## Russian and East European Studies

See Area Studies Programs; and the Institute of Languages and Literatures

## Scandinavian Languages and Literature

(205 Folwell Hall: 625-2080)

### College of Liberal Arts

(German, Scandinavian, and Dutch)

Textbooks for most Scan courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

William Mishler, Associate Professor

Tuulikki Sinks, Teaching Specialist

Göran Stockenström, Professor

**Read about language laboratories on page 485.**

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Scandinavian Languages. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

## Danish (*Dan*)

*No Dan courses offered through Extension Classes 1995-96*

## Finnish (*Fin*)

**Fin 1101-1102-1103 BEGINNING FINNISH.** 5 credits each quarter, tuition\* each quarter: Resident \$397.50; Non-resident \$1152.75. (IS)

Intended for students who have little or no previous knowledge of Finnish. Stresses fundamentals of grammar, correct pronunciation, reading, practice in conversation, and simple composition. *Sections will be offered only if there is sufficient enrollment of 12 or more. Students are encouraged to register prior to the first night of class.* (No prereq for 1101; 1101 or # for 1102; 1102 or # for 1103)

Fall Qtr, 1101, Sec 1, T, 4:15-8:15, FolH 344, Sinks

Winter Qtr, 1102, Sec 1, T, 4:15-8:15, FolH 344, Sinks

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



Spring Qtr, 1103, Sec 1, T, 4:15-8:15, FolH 344,  
Sinks

**Fin 1104-1105-1106 INTERMEDIATE FINN-  
ISH.** 5 credits each quarter, tuition\* each quarter:  
Resident \$397.50; Non-resident \$1152.75.

Continued development of reading, writing, and  
speaking skills; problems and usage of Finnish  
grammar. (Prereq 1103 or equivalent for 1104;  
1104 or equivalent for 1105; 1105 or equivalent for  
1106)

Fall Qtr, 1104, Sec 1, Th, 4:15-8:15, FolH 142,  
Sinks

Winter Qtr, 1105, Sec 1, Th, 4:15-8:15, FolH  
334, Sinks

Spring Qtr, 1106, Sec 1, Th, 4:15-8:15, FolH 334,  
Sinks

### *Norwegian (Nor)*

**Nor 1101-1102-1103 BEGINNING NORWE-  
GIAN.** 5 credits each quarter, tuition\* each quarter:  
Resident \$397.50; Non-resident \$1152.75. (IS)

This sequence, intended for students who have little  
or no previous knowledge of Norwegian, stresses  
fundamentals of grammar, correct pronunciation,  
reading, practice in conversation, and simple com-  
position. *Sections will be offered only if there is  
sufficient enrollment of 12 or more. Students are  
encouraged to register prior to the first night of  
class.* (No prereq for 1101; 1101 or # for 1102; 1102  
or # for 1103)

Fall Qtr, 1101, Sec 1, M, 6:20-8:50; Th, 6:20-8,  
FolH 134

Winter Qtr, 1102, Sec 1, M, 6:20-8:50; Th, 6:20-  
8, FolH 134

Spring Qtr, 1103, Sec 1, M, 6:20-8:50; Th, 6:20-  
8, FolH 104

**Nor 1104-1105-1106 INTERMEDIATE NOR-  
WEGIAN.** 5 credits each quarter, tuition\* each  
quarter: Resident \$397.50; Non-resident \$1152.75.  
(IS)

Continued development of reading, writing, and  
speaking skills (Prereq 1103 or equivalent for 1104;  
1104 or equivalent for 1105; 1105 or equivalent for  
1106)

Fall Qtr, 1104, Sec 1, M, 6:20-8:50; Th, 6:20-8,  
FolH 50

Winter Qtr, 1105, Sec 1, M, 6:20-8:50; Th, 6:20-  
8, FolH 138

Spring Qtr, 1106, Sec 1, M, 6:20-8:50; Th, 6:20-  
8, FolH 50

### *Scandinavian (Scan)*

**Scan 3601 GREAT LITERARY WORKS OF  
SCANDINAVIA.** 4 credits, tuition\*: Resident \$344;  
Non-resident \$997.60.

Major Scandinavian literary works from the Medi-  
eval period to the present, including sagas, fairy  
tales, short stories, novels, and a play or two. All  
works are read in translation. No prior knowledge  
of Scandinavian culture is assumed. (No prereq)

Winter Qtr, Sec 1, M, 6:20-8:50, FolH 148,  
Mishler

**Scan 3605 THE SCANDINAVIAN AND FINN-  
ISH SHORT STORY.** 4 credits, tuition\*: Resident  
\$344; Non-resident \$997.60.

A consideration of the short story from Iceland,  
Denmark, Norway, Sweden, and Finland from 1890  
to the present. Traditional and modern tales by  
some of Scandinavia's greatest writers. All works  
are read in translation. No prior knowledge of  
Scandinavian culture is assumed. (No prereq)

Spring Qtr, Sec 1, M, 6:20-8:50, FolH 344, Mishler

### *Swedish (Swed)*

**Swed 1101-1102-1103 BEGINNING SWEDISH.**  
5 credits each quarter, tuition\* each quarter: Resi-  
dent \$397.50; Non-resident \$1152.75. (IS)

This sequence, intended for students who have little  
or no previous knowledge of Swedish, stresses  
fundamentals of grammar, correct pronunciation,  
reading, practice in conversation, and simple com-  
position. *Sections will be offered only if there is  
sufficient enrollment of 12 or more. Students are  
encouraged to register prior to the first night of  
class.* (No prereq for 1101; 1101 or # for 1102; 1102  
or # for 1103)

Fall Qtr, 1101, Sec 1, T, 6:10-10:05, FolH 50,  
Stockenström

Winter Qtr, 1102; Sec 1, T, 6:10-10:05, FolH 50,  
Stockenström

Spring Qtr, 1103, Sec 1, T, 6:10-10:05, FolH 50,  
Stockenström

**Swed 1104-1105-1106 INTERMEDIATE SWED-  
ISH.** 5 credits each quarter, tuition\* each quarter:  
Resident \$397.50; Non-resident \$1152.75. (IS)

Continued development of reading, writing, and speak-  
ing skills. (Prereq 1103 or equivalent for 1104; 1104 or  
equivalent for 1105; 1105 or equivalent for 1106)

Fall Qtr, 1104, Sec 1, Th, 6:10-10:05, FolH 218,  
Stockenström

Winter Qtr, 1105, Sec 1, Th, 6:10-10:05, FolH  
50, Stockenström

Spring Qtr, 1106, Sec 1, Th, 6:10-10:05, FolH  
218, Stockenström

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

### Secondary Education

See Curriculum and Instruction

### Sign Language, American

See Educational Psychology

### Social and Behavioral Sciences

See General College

### Social and Administrative Pharmacy (SAPh)

(7-115 Health Sciences Unit F: 624-2112)

#### College of Pharmacy

Textbooks for most SAPh courses are available at University of Minnesota Bookstore—Health Sciences (625-8600).

Thomas M. McKennell, Assistant Professor  
and Director of Pharmacy Continuing  
Education

**SAPh 5007 BIOLOGY OF AGING.** 2 credits,  
§Phar 5007, §HSU 5031, tuition\*: Resident Gradu-  
ate credit \$343; Non-resident Graduate credit  
\$754.60; Resident Graduate School credit \$431;  
Non-resident Graduate School credit \$948.20.

Biological theories of aging are reviewed; biological changes associated with aging in organ and sensory systems are studied. Other topics examined are the nutritional needs of the elderly, and their use of medications. Physical changes due to normal aging are contrasted with those having a pathological base. *Students who wish to take this course for undergraduate credit should register for either Phar 5007 or HSU 5031.* For information about this course, call Professor McKennell at 624-2442. (No prereq. Meets concurrently with HSU 5031 and Phar 5007. Students must register in SAPh 5007 for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr, ●Sec 1, Th, 4:40-6:25, Moos T 5125,  
McKennell

### Social and Philosophical Foundations of Education

See Educational Policy and Administration

### Social Work (SW)

(400 Ford Hall: 624-5888)

#### College of Human Ecology

Textbooks for most SW courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

(See also Sociology; General College; Public Health; Education; Health Science Units; and Social, Administrative, and Hospital Pharmacy)

Ann Ahlquist, Lecturer  
Michael Baizerman, Professor  
Jerome Beker, Professor  
Neil Bracht, Professor  
Kevin Burke, Coordinator  
Irl Carter, Associate Professor  
Paula Childers, Lecturer  
Mark Frenzel, Lecturer  
Anne Gearity, Lecturer  
Jane Gilgun, Associate Professor  
D. Michael Graham, Assistant Clinical Professor  
C. David Hollister, Professor  
Nancy Johnston, Coordinator and Instructor  
Linda Jones, Associate Professor  
Nan Kalke, Education Specialist  
Helen Kivnick, Associate Professor  
Anne Long, Lecturer  
Gloria M. McGee, Coordinator  
Donna Marget, Lecturer  
Megan Morrissey, Coordinator and Instructor  
Jean K. Quam, Director and Professor  
James Reinardy, Lecturer  
Ronald H. Rooney, Associate Professor  
Susan Schultz, Lecturer  
Maura Sullivan, Coordinator and Instructor  
Erin Sullivan Sutton, Lecturer  
Victoria VanSlyke, Lecturer  
Oliver Williams, Assistant Professor

*The School of Social Work does not offer a bachelor's degree in social work. For information on the Master of Social Work or the Ph.D. in social work, contact the school at 624-1096.*

**NOTE:** See the **Weekend Master of Social Work (M.S.W.) Option** described beginning page 350, and the **Child Abuse Prevention Studies Certificate** described beginning page 355.

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Social Work. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**SW 1001 INTRODUCTION TO SOCIAL WELFARE AND COMMUNITY SERVICES.** 5 credits, tuition\*: Resident \$397.50; Non-resident \$1152.75. (IS)

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, Th, 6-9:30, FordH 130

Winter Qtr, Sec 2, T, 6-9:30, FordH 175

Spring Qtr, Sec 3, Th, 6-9:30, FordH 175

**SW 3201 INTERVENTIONS WITH INDIVIDUALS AND GROUPS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Application of social work skills and values to work with individuals and small groups using an ecological framework. (No prereq. Limited to 50)

Winter Qtr, ★Sec 1, W, 6-9:30, FordH 160

Spring Qtr, ★Sec 2, M, 6-9:30, FordH 170

**SW 3202 INTERVENTIONS IN COMMUNITY AND SOCIAL POLICY.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Application of social work skills and values to community organization, social action, and social problems, using an ecological framework. (No prereq. Limited to 50)

Winter Qtr, ★Sec 1, M, 6-9:30, FordH 160

Spring Qtr, ★Sec 2, T, 6-9:30, FordH 160

**SW 5010 SEMINAR: SPECIAL TOPICS—CLINICAL WORK WITH CHILDREN.** 3 credits, tuition\*: Resident \$258; Non-resident \$748.20; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

The child's inner psychological experience and needs are examined through exploration of child development theory. Social work practice and clinical interventions with children are considered through discussion of case material and application of theory. (Prereq 8402, 51 cr MSW student, or social work professional. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25)

Winter Qtr, ★Sec 3, M, 4-6:45, FordH 175,  
Gearity, Schultz

**SW 5010 SEMINAR: SPECIAL TOPICS—SOCIAL WORK PRACTICE ISSUES IN HEALTH AND MENTAL HEALTH SETTINGS: An Advanced Seminar on Managed Mental Health Care and Professional Implications.** 3 credits, tuition\*: Resident \$258; Non-resident \$748.20; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Advanced seminar in the health/mental health area, providing a more individualized learning opportunity in a focused professional practice or policy interest. Focuses on emerging professional issues, for example, managed mental health care. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension students)

Spring Qtr, ★Sec 4, T, 3:30-6:30, FordH 285,  
Bracht

**SW 5024 MULTIDISCIPLINARY PERSPECTIVES OF AGING.** 4 credits, §AdEd 5440, §Educ 5440, §CPsy 5305, §HSU 5009, §Phar 5009, §SAHP 5009, §PA 5414, §PubH 5737, §Soc 5960, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

A multidisciplinary introduction to aging and the aging process. Topics include: sociological, biological, and psychological aspects of aging; theories of aging; death and bereavement; issues and problems of older adults in America; human services and their delivery systems such as health, nutrition, long-term care, and education; public policy and legislation; environment and housing, retirement. *Students who want graduate credit should register for one of the following: AdEd 5440, CPsy 5305, Nurs 5780, PA 5414, PubH 5737, SW 5024, or Soc 5960. Students who want undergraduate credit should register for Phar 5009 or HSU 5009.* (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with AdEd 5440, CPsy 5305, HSU 5009, Phar 5009, PA 5414, PubH 5737, Soc 5960. A joint Day/Extension class)

Fall Qtr, Sec 1, MW, 4:40-6:25, MoosT 2-690,  
Quam, AUCA Faculty (Limited to a combined total of 37 Extension students)

Spring Qtr, Sec 2, MW, 4:40-6:25, MoosT 2-690, Quam, AUCA Faculty

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**SW 5028 SEMINAR: SPECIAL TOPICS—SOCIAL WORK IN THE SCHOOLS.** 3 credits, tuition\*: Resident \$258; Non-resident \$748.20; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Prepares students to apply social work methods and skills in a school setting. Emphasis will be placed on developing clinical skills, consultation, advocacy, and use of community resources as a school social worker. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Winter Qtr, ★●Sec 2, Th, 4:15-7, FordH 70, Marget

**SW 5100 YOUTH IN THE WORLD.** 3 credits, \$YoSt 5100, tuition\* (includes \$10 course fee): Resident \$268; Non-resident \$758.20; Resident Graduate credit \$364; Non-resident Graduate credit \$788.80; Resident Graduate School credit \$656.50; Non-resident Graduate School credit \$1432.30.

A basic theoretical and conceptual framework for understanding adolescence; adolescents and youth in the context of everyday life—in school, at play, in the community, at home. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension students)

Fall Qtr, ★●Sec 1, M, 3-6, McNH 386A, StP Campus, Baizerman

**SW 5111 CONTEMPORARY POLICY AND PROGRAMS IN SOCIAL WELFARE.** 4 undergraduate credits, tuition\*: Resident \$344; Non-resident \$997.60; 3 graduate credits, tuition\*: Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

A framework for analysis of concepts and principles in social policy for social welfare programs and services. (Prereq grad standing or 12 cr in social science. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr, Sec 1, T, 7-10, FordH 130, Carter

**SW 5234 CLINICAL PRACTICE WITHIN A HOSPITAL AND HEALTH CARE SETTING.** 3 credits, tuition\*: Resident \$258; Non-resident \$748.20; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Prepares students for practice in a hospital or health care setting. Provides students with a focused, practice-oriented learning environment that will build upon previous experiential and academic learning. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension students)

Winter Qtr, ★●Sec 1, Th, 3-6, FordH 175, Frenzel

**SW 5312 SEMINAR: DIRECT WORK WITH ADOLESCENTS.** 3 credits, \$YoSt 5312, tuition\*: Resident \$258; Non-resident \$748.20; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Gives students an understanding of direct work with troubled and at-risk adolescents in a wide range of settings in which social workers are typically involved. Emphasis is on young people in groups in the "life space," in everyday life, rather than in one-to-one, office-based interactions. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Fall Qtr, ★●Sec 1, Th, 5-8, McNH 386, StP Campus, Beker

**SW 5414 SOCIAL GROUP WORK.** 3 credits, tuition\*: Resident \$258; Non-resident \$748.20; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Principles of social group work practice applicable to a variety of task and treatment groups. Small group as a social process to achieve task and treatment goals, communication in groups, decision-making, self-help, and therapeutic groups. Stages of group development and termination. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 20)

Spring Qtr, ★Sec 1, W, 5-8, FordH 170

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**SW 5601 ETHNO-CULTURAL CONCEPTS IN SOCIAL WORK PRACTICE.** 4 undergraduate credits, tuition\*: Resident \$344; Non-resident \$997.60; 3 graduate credits, tuition\*: Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Relation of ethno-cultural concepts to the development of social welfare policies and services, and social work practice. Critical examination of commonalities of principles and cross-ethnic issues that integrate ethno-cultural dimensions and identification of significant orientations toward welfare issues and practices among the four major ethnic minority groups of color (American Indian, Asian American, black, Hispanic). The contribution of each to effective interpersonal and intragroup relationships with the social service delivery system will be discussed. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 35)

Spring Qtr, ★Sec 2, T, 7-10, FordH 170

**SW 5970 INDEPENDENT STUDY IN SOCIAL WORK.** Credits arr, tuition\* each credit: Resident \$86; Non-resident \$249.40; Resident Graduate credit \$118; Non-resident Graduate credit \$259.60; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Independent study in areas of special interest to students and faculty. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr, Sec 1, Arr

Winter Qtr, Sec 2, Arr

Spring Qtr, Sec 3, Arr

### Courses Meeting at the Hennepin County Government Center

The following courses meet in the Employee Development Classroom (Level A of the Hennepin County Government Center). Enter the building on the north side of 6th Street, under the skyway; take the escalator downstairs to Level A. Parking is available after 4 p.m. weekdays in the Hennepin County underground garage for \$2 maximum.

**SW 5010 SEMINAR: SPECIAL TOPICS—CHEMICAL DEPENDENCY.** 3 credits, tuition\*: Resident \$258; Non-resident \$748.20; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Students are taught how to increase effectiveness in recognizing and intervening in situations involving

substance abuse and chemical dependency. Current public policy issues and social workers' roles in addressing them. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25)

Fall Qtr, ★Sec 1, M, 4:45-7:45, Henn Co Govt Ctr, Hollister, McGee

**SW 5010 SEMINAR: SPECIAL TOPICS—DEPRESSION: NEW DEVELOPMENTS IN CLINICAL CARE.** 3 credits, tuition\*: Resident \$258; Non-resident \$748.20; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Theories and research on the origins of depressive illness. Therapeutic procedures in assessment, diagnosis, and intervention. Focus on understanding the use of medications and psychotherapy in treating persons living with the disorder. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25)

Winter Qtr, ★Sec 2, T, 4:45-7:45, Henn Co Govt Ctr, Graham

**SW 5010 SEMINAR: SPECIAL TOPICS—SOCIAL WORK ETHICS.** 3 credits, tuition\*: Resident \$258; Non-resident \$748.20; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Students are taught how to address ethical principles for individual behavior in the role of a social worker, as well as ethical responsibilities related to clients, colleagues, employers, the profession of social work and society. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension students)

Spring Qtr, ★Sec 4, M, 4:45-7:45, Henn Co Govt Ctr, Jones

**SW 5211 ADVANCED THEORIES OF HUMAN GROWTH AND CHANGE.** 4 undergraduate credits, tuition\*: Resident \$344; Non-resident \$997.60. 3 graduate credits, tuition\*: Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

See course description for SW 5211 sec 1 above. (Prereq grad standing or 12 cr in social sciences. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25)

Spring Qtr, ★Sec 2, T, 4:45-7:45, Henn Co Govt Ctr, Graham

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**SW 5212 SOCIAL WORK WITH OLDER ADULTS.** 3 credits, tuition\*: Resident \$258; Non-resident \$748.20; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

An introduction to and overview of social work knowledge, skills, and values as applied to working with older adults. Includes examination of theories and attitudes towards aging, the nature and limitations of gerontological social work, forces shaping the delivery system and context of practice, major biopsychosocial dimensions in practice, and different models of intervention. Emphasis placed on cultural competence in working with ethnic groups and special populations. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 20 Extension students)

Winter Qtr, ★●Sec 2, W, 4:45-7:45, Henn Co Govt Ctr, Reinardy

**SW 5301 CHILD ABUSE PREVENTION I: RESEARCH AND THEORY.** 3 credits, tuition\*: Resident \$258; Non-resident \$748.20; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

First of three-course sequence on prevention of child abuse and neglect, provides conceptual (research and theory) framework for developing primary and secondary preventive interventions. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25)

Fall Qtr, ★Sec 3, T, 4:45-7:45, Henn Co Govt Ctr, Gilgun

**SW 5349 SOCIAL WELFARE IN AMERICA.** 4 undergraduate credits, tuition\*: Resident \$344; Non-resident \$997.60; 3 graduate credits, tuition\*: Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Advanced survey of social services, public policies, and profession of social work—colonial to present. Issues include dependency, deviancy, crime, social security, public health, social reform, functions of public and voluntary institutions (charities, settlements). (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25)

Fall Qtr, ★Sec 1, W, 4:45-7:45, Henn Co Govt Ctr

**SW 5425 BRIEF TREATMENT AND THE TASK-CENTERED MODEL.** 3 credits, tuition\*: Resident \$258; Non-resident \$748.20; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Theory and practice of brief treatment approaches to social work practice. Various time-limited models are explored and contrasted, with particular focus on task-centered practice, a model that is both time limited and empirically based. Emphasis on understanding the theoretical base and application of the model in a variety of social work situations. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25)

Winter Qtr, ★Sec 1, M, 4:45-7:45, Henn Co Govt Ctr, Childers

**SW 8104 CHILD WELFARE AND THE LAW.** 3 credits, tuition\*: Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Social work practice in juvenile court: child abuse and neglect reporting laws, risk assessment, reasonable efforts, case plan, custody proceedings, permanency planning, termination of parental rights, child testimony, social work testimony, adoption laws. (No prereq. Open only to students admitted to the University of Minnesota Graduate School. Limited to 25)

Spring Qtr, ★Sec 2, W, 4:45-7:45, Henn Co Govt Ctr

### Weekend Master of Social Work (M.S.W.) Option

The School of Social Work, in conjunction with Continuing Education and Extension/University College, is offering graduate students the opportunity to earn their M.S.W. degree through full-time weekend study. Students must register for three courses each quarter, but may elect to complete their required field work either concurrently or through 12-week, full-time summer block placements. The Weekend M.S.W. Option is highly structured and adheres to the current day school curriculum design and admissions standards, while allowing students the opportunity to maintain full-time employment. Program and admissions inquiries should be directed to Megan Morrissey, Director of Admissions, (612) 624-1096.

*All courses meeting in Peik Hall (PeikH) are offered in ITV format (two-way interactive video and audio).*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**SW 5010 SEMINAR: SPECIAL TOPICS—SOCIAL WORK ETHICS.** 3 credits, tuition\*: Resident \$258; Non-resident \$748.20; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Students are taught how to address ethical principles for individual behavior in the role of a social worker, as well as ethical responsibilities related to clients, colleagues, employers, the profession of social work and society. *Priority registration given to students admitted to the Weekend M.S.W. Option.* (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25)

Spring Qtr, ★Sec 5, Su, 1:30-4:30, FordH 160, Jones

**SW 5026 MEDIATION AND CONFLICT RESOLUTION.** 3 credits, tuition\*: Resident \$258; Non-resident \$748.20; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Students are taught how to develop beginning skills as a mediator, and how to make informed decisions regarding the appropriateness of mediation in relation to conflicts frequently confronting social work practitioners such as divorce, neighborhood disputes, and conflicts between parents and adolescents, between spouses, and between crime victims and offenders. *Registration limited to students admitted to the Weekend M.S.W. Option.* (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr, Sec 1, Sa, 10 a.m.-1, PeikH 225

**SW 5028 SOCIAL WORK IN THE SCHOOLS.** 3 credits, tuition\*: Resident \$258; Non-resident \$748.20; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Students are taught how to apply social work methods and skills in a school setting. Emphasis on developing clinical skills, consultations, advocacy, and use of community resources as a school social worker. *Priority registration given to students admitted to the Weekend M.S.W. Option.* (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25)

Winter Qtr, ★Sec 1, Su, 10 a.m.-1, FordH 170, Marget

**SW 5111 CONTEMPORARY POLICY AND PROGRAMS IN SOCIAL WELFARE.** 4 undergraduate credits, tuition\*: Resident \$344; Non-resident \$997.60; 3 graduate credits, tuition\*: Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

A framework for analysis of concepts and principles in social policy for social welfare programs and services. *Priority registration given to students admitted to the Weekend M.S.W. Option.* (Prereq grad standing or 12 cr in social science. Qualified students may register for graduate credit at the University of Minnesota. Limited to 30)

Spring Qtr, ★Sec 2, Su, 11 a.m.-2, FordH 170, Carter

**SW 5211 ADVANCED THEORIES OF HUMAN GROWTH AND CHANGE.** 4 undergraduate credits, tuition\*: Resident \$344; Non-resident \$997.60; 3 graduate credits, tuition\*: Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Socio-psycho-biological factors associated with individual and group development as applied to social work practice. *Priority registration given to students admitted to the Weekend M.S.W. Option.* (Prereq grad standing or 12 cr in social science. Qualified students may register for graduate credit at the University of Minnesota. Limited to 30)

Fall Qtr, ★Sec 1, Su, 11 a.m.-2, FordH 150, Kivnick

**SW 5212 SOCIAL WORK WITH OLDER ADULTS.** 3 credits, tuition\*: Resident \$258; Non-resident \$748.20; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Introduction to and overview of social work knowledge, skills, and values as applied to working with older adults. Includes examination of theories and attitudes toward aging, the nature and limitations of gerontological social work, forces shaping the delivery system and context of practice, major biopsychosocial dimensions in practice, and different models of intervention. Emphasis placed on cultural competence in working with ethnic groups and special populations. *Priority registration given to students admitted to the Weekend M.S.W. Option.* (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25)

Fall Qtr, ★Sec 1, Su, 10 a.m.-1, FordH 160

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**SW 5349 SOCIAL WELFARE IN AMERICA.** 4 undergraduate credits, tuition\*: Resident \$344; Non-resident \$997.60; 3 graduate credits, tuition\*: Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Advanced survey of social services, public policies, and profession of social work—colonial to present. Issues include dependency, deviancy, crime, social security, public health, social reform, functions of public and voluntary institutions (charities, settlements). *Priority registration given to students admitted to the Weekend M.S.W. Option.* (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 30)

Fall Qtr, ★Sec 2, Sa, 10 a.m.-1, FordH 155, Morrissey

**SW 5601 ETHNO-CULTURAL CONCEPTS IN SOCIAL WORK PRACTICE.** 4 undergraduate credits, tuition\*: Resident \$344; Non-resident \$997.60; 3 graduate credits, tuition\*: Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Relation of ethno-cultural concepts to the development of social welfare policies and services, and social work practice. Critical examination of commonalities of principle and cross-ethnic issues that integrate ethnocultural dimensions and identification of significant orientations toward welfare issues and practices among the four major ethnic minority groups of color (American Indian, Asian American, black, Hispanic). The contribution of each to effective interpersonal and intra-group relationships with the social service delivery system will be discussed. *Priority registration given to students admitted to the Weekend M.S.W. Option.* (Prereq grad standing or 12 cr in social science. Qualified students may register for graduate credit at the University of Minnesota. Limited to 30)

Winter Qtr, ★Sec 1, Sa, 10 a.m.-1, FordH 130, Williams

**SW 8010 FIELD INSTRUCTION I.** Credits arr, tuition\* each credit: Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

**Must be taken S-N.** *Priority registration given to students admitted to the Weekend M.S.W. Option. Meets alternate Saturdays.* (No prereq. Open only to students admitted to the University of Minnesota Graduate School)

Fall Spec Term, Sec 1, Sa, 8-9:45 a.m., dates arr, FordH 285, Sullivan

Winter Spec Term, Sec 2, Sa, 8-9:45 a.m., dates arr, FordH 285, Sullivan

Spring Spec Term, Sec 3, Sa, 8-9:45 a.m., dates arr, FordH 285, Sullivan

**SW 8020 FIELD INSTRUCTION II.** Credits arr, tuition\* each credit: Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Field practice in social work process under direct supervision. **Must be taken S-N.** *Priority registration given to students admitted to the Weekend M.S.W. Option. Meets alternate Saturdays.* (Prereq 8010. Open only to students admitted to the University of Minnesota Graduate School)

Fall Spec Term, Sec 1, Sa, 8-9:45 a.m., dates arr, FordH 150

Winter Spec Term, Sec 2, Sa, 8-9:45 a.m., dates arr, FordH 150

Spring Spec Term, Sec 3, Sa, 8-9:45 a.m., dates arr, FordH 150

**SW 8030 FIELD INSTRUCTION III.** Credits arr, tuition\* each credit: Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Field practice in social work process under direct supervision. **Must be taken S-N.** *Priority registration given to students admitted to the Weekend M.S.W. Option. Meets alternate Saturdays.* (Prereq 8020. Open only to students admitted to the University of Minnesota Graduate School)

Fall Spec Term, Sec 1, Arr, Sullivan

Winter Spec Term, Sec 2, Arr, Sullivan

Spring Spec Term, Sec 3, Arr, Sullivan

**SW 8104 CHILD WELFARE AND THE LAW.** 3 credits, tuition\*: Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Social work practice in juvenile court: child abuse and neglect reporting laws, risk assessment, reasonable efforts, case plan, custody proceedings, permanency planning, termination of parental rights, child testimony, social work testimony, adoption laws. *Registration limited to students admitted to the Weekend M.S.W. Option.* (No prereq. Open only to students admitted to the University of Minnesota Graduate School)

Fall Qtr, Sec 1, Sa, 10 a.m.-1, PeikH 155, Sutton

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



**SW 8121 SOCIAL POLICY AND DELIVERY SYSTEMS FOR FAMILY AND CHILDREN'S SERVICES.** 3 credits, tuition\*: Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Application theoretical social policy framework to goals, tasks, organization, and delivery arrangements of programs serving social welfare of families and children. *Registration limited to students admitted to the Weekend M.S.W. Option.* (Prereq 5111. Open only to students admitted to the University of Minnesota Graduate School)

Fall Qtr, Sec 1, Sa, 1:30-4:30, PeikH 215, Kalke

**SW 8311 ISSUES AND INTERVENTIONS IN CHILD SEXUAL ABUSE.** 3 credits, \$5311, tuition\*: Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Major issues and interventions involved in child sexual abuse. Development of knowledge and skills in working with sexually abused children and their families. Perceptions of victims, perpetrators, mothers, and other family members; interviewing; justice system; child protection. *Priority registration given to students admitted to the Weekend M.S.W. Option.* (No prereq. Open only to students admitted to the University of Minnesota Graduate School. Limited to 30)

Spring Qtr, ★Sec 1, Sa, 10 a.m.-1, FordH 130

**SW 8350 PLANNED SOCIAL CHANGE.** 3 credits, tuition\*: Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Analysis of systems in social work practice for social change, including human needs, policy planning, programming, management, and community participation. *Registration limited to students admitted to the Weekend M.S.W. Option.* (No prereq. Open only to students admitted to the University of Minnesota Graduate School)

Winter Qtr, Sec 1, Sa, 1:30-4:30, PeikH 215, Long

**SW 8400 SOCIAL WORK METHODS I.** 3 credits, tuition\*: Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Development of a conceptual understanding of, and skill in the social work process utilizing the ecological model and the problem-solving model as approaches for analysis. Emphasis is on ethics, assessment, interviewing skills, and goal-setting. *Priority registration given to students admitted to the Weekend M.S.W. Option.* (No prereq. Open only to students admitted to the University of Minnesota Graduate School. Limited to 25)

Fall Qtr, ★Sec 1, Sa, 1:30-4:30, FordH 130, VanSlyke

**SW 8401 SOCIAL WORK METHODS II.** 3 credits, tuition\*: Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Further development of a conceptual understanding of, and skill in use of various roles and specific interventions in working with individuals, families, and groups. *Priority registration given to students admitted to the Weekend M.S.W. Option.* (Prereq 8400. Open only to students admitted to the University of Minnesota Graduate School. Limited to 25)

Winter Qtr, ★Sec 1, Sa, 1:30-4:30, FordH 130,

VanSlyke

**SW 8402 SOCIAL WORK METHODS III.** 3 credits, tuition\*: Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Issues and interventions in social work macro practice, including organizational structure and analysis, community organizing, and working in task groups. *Priority registration given to students admitted to the Weekend M.S.W. Option.* (Prereq 8400, 8401. Open only to students admitted to the University of Minnesota Graduate School. Limited to 25)

Spring Qtr, ★Sec 1, Sa, 1:30-4:30, FordH 130,

Reinardy

**SW 8406 SUPERVISION AND CONSULTATION IN SOCIAL WORK PRACTICE.** 3 credits, tuition\*: Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Principles and practices of first-line supervision in direct practice systems—administration, education, and support. Principles and methods of consultation and staff development. *Priority registration given to students admitted to the Weekend M.S.W. Option.* (Prereq 8401, #. Open only to students admitted to the University of Minnesota Graduate School. Limited to 25)

Spring Qtr, ★Sec 1, Su, 10 a.m.-1, FordH 150,

VanSlyke

**SW 8407 STRATEGIES OF FAMILY INTERVENTION.** 3 credits, tuition\*: Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Seminar in methods of and strategies for helping families cope with family problems. *Priority registration given to students admitted to the Weekend M.S.W. Option.* (Prereq 8401 or #, second year MSW student. Open only to students admitted to the University of Minnesota Graduate School. Limited to 25)

Winter Qtr, ★Sec 1, Su, 10 a.m.-1, FordH 175

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\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**SW 8408 DIRECT WORK WITH CHILDREN AND THEIR FAMILIES.** 3 credits, tuition\*: Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Research, theory, and practice in child welfare settings: research and theory on attachment, resilience, and vulnerability; child protection investigation and interviewing; work with maltreated children and their families; AIDS, crack, and cocaine babies; child placement; and foster care. *Registration limited to students admitted to the Weekend M.S.W. Option.* (Prereq 8121, 8402 or equivalent. Open only to students admitted to the University of Minnesota Graduate School)

Fall Qtr, Sec 1, Sa, 1:30-4:30, PeikH 225

**SW 8414 SOCIAL WORK METHODS WITH GROUPS.** 3 credits, \$5414, tuition\*: Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Analysis of basic principles of social work practice applicable to both task and treatment groups. The small group as a social process to achieve task and treatment goals. Socio-philosophic orientation, theoretical frames of reference, application of structure, task and process variables, use of member-to-member interactions, group goal setting, and professional relationships with groups, with individual members, and with systems external to small group. *Priority registration given to students admitted to the Weekend M.S.W. Option.* (Prereq 8400 or #. Open only to students admitted to the University of Minnesota Graduate School. Limited to 20)

Winter Qtr, ★Sec 1, Su, 1:30-4:30, FordH 150

**SW 8421 SOCIAL WORK PRACTICE: PSYCHOPATHOLOGY AND INTERVENTION.** 3 credits, \$5421, tuition\*: Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Roles and intervention strategies of social workers in variety of service settings. Problems frequently presented, treatment alternatives, interdisciplinary practice, and ethical issues. *Registration limited to students admitted to the Weekend M.S.W. Option.* (No prereq. Open only to students admitted to the University of Minnesota Graduate School)

Spring Qtr, Sec 1, Sa, 1:30-4:30, PeikH 155,  
Graham

**SW 8424 SOCIAL WORK WITH INVOLUNTARY CLIENTS.** 3 credits, tuition\*: Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Analysis of involuntary transactions in variety of settings. Theory, ethics, strategies for intervention. *Priority registration given to students admitted to the Weekend M.S.W. Option.* (Prereq 8401, second year MSW student. Open only to students admitted to the University of Minnesota Graduate School. Limited to 25)

Fall Qtr, ★Sec 1, Su, 1:30-4:30, FordH 170,  
Rooney

**SW 8425 TASK-CENTERED PRACTICE.** 3 credits, tuition\*: Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Theory and practice of time-limited, empirically based approaches drawing primarily from the task-centered approach. Emphasis on instruction; practice and feedback on specific task-centered skills. *Registration limited to students admitted to the Weekend M.S.W. Option.* (No prereq. Open only to students admitted to the University of Minnesota Graduate School)

Winter Qtr, Sec 1, Sa, 10 a.m.-1, PeikH 155,  
Rooney

**SW 8426 INTERVENTION WITH BATTERED WOMEN AND THEIR FAMILIES.** 3 credits, tuition\*: Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Current theories, research, and social work practice in the area of battered women and their families. *Registration limited to students admitted to the Weekend M.S.W. Option.* (No prereq. Open only to students admitted to the University of Minnesota Graduate School)

Spring Qtr, Sec 1, Sa, 10 a.m.-1, PeikH 155

**SW 8427 FAMILY-CENTERED, HOME-BASED SERVICES.** 3 credits, tuition\*: Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Problems of concern to the family and attempts to empower parents and provide them support. Designed to meet needs in both the academic and practice arenas. Family-oriented content specific to the FCHBS area is presented. Students will have the opportunity to apply family-centered principles to their own practice settings. *Registration limited to students admitted to the Weekend M.S.W. Option.* (No prereq. Open only to students admitted to the University of Minnesota Graduate School)

Winter Qtr, Sec 1, Sa, 1:30-4:30, PeikH 155

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**SW 8450 SPECIAL TOPICS: PRACTICE WITH INDIVIDUALS, FAMILIES, AND GROUPS—CULTURE, FAMILY, AND PRACTICE.** 3 credits, tuition\*: Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Multidisciplinary exploration of how differing cultural identities and family structures influence both child and adolescent development, as well as the availability and provision of relevant social services. *Registration limited to students admitted to the Weekend M.S.W. Option.* (Prereq 8401 or #. Open only to students admitted to the University of Minnesota Graduate School)

Winter Qtr, Sec 1, Sa, 10 a.m.-1, PeikH 315,  
Burke

**SW 8450 SPECIAL TOPICS: PRACTICE WITH INDIVIDUALS, FAMILIES, AND GROUPS—ISSUES IN SUBSTANCE ABUSE AND CHILD WELFARE.** 3 credits, tuition\*: Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Students are taught to increase their effectiveness in recognizing and intervening in situations involving substance abuse and chemical dependency, particularly as they impact on child welfare; and to increase their awareness of social policy issues as they relate to substance abuse and chemical dependency with child welfare. *Registration limited to students admitted to the Weekend M.S.W. Option.* (Prereq 8401 or #. Open only to students admitted to the University of Minnesota Graduate School)

Spring Qtr, Sec 2, Sa, 1:30-4:30, PeikH 215,  
Hollister

**SW 8901 SOCIAL WORK METHODS.** 3 credits, tuition\*: Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Logic, methods, and techniques of scientific inquiry in social work. Nature and functions of theory, models, assumptions, problem formulation, causal analysis, conceptualization, operationalism, and hypothesis formulation. *Priority registration given to students admitted to the Weekend M.S.W. Option.* (No prereq. Open only to students admitted to the University of Minnesota Graduate School. Limited to 30)

Winter Qtr, ★Sec 1, Su, 11 a.m.-2, FordH 130,  
Graham

**SW 8902 DIRECT PRACTICE EVALUATION.** 3 credits, tuition\*: Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Intensive, advanced course focusing on evaluation of social work direct practice. Students design evaluations which incorporate current evaluation methods and principles derived from research, theory, practice wisdom, and their own experience. Evaluation methods include single-system designs, event analysis, client-focused evaluations, and practitioner-focused evaluations. *Registration limited to students admitted to the Weekend M.S.W. Option.* (Prereq 8901 or equivalent. Open only to students admitted to the University of Minnesota Graduate School)

Spring Qtr, Sec 1, Sa, 10 a.m.-1, PeikH 225,  
Gilgun

### Child Abuse Prevention Studies (CAPS) Certificate

The School of Social Work in conjunction with Continuing Education and Extension/University College are offering a post-baccalaureate certificate program on child abuse prevention. Program and admission inquiries should be directed to the CAPS Certificate Coordinator, Continuing Education and Extension/University College Counseling, 314 Nolte Center, 315 Pillsbury Drive S.E., Minneapolis, MN 55455-0197; telephone (612) 625-2500. Please see page 524 in this Bulletin for a description of this program.

*All courses offered in ITV format (two-way interactive video and audio). Classrooms will be announced later.*

**SW 5301 CHILD ABUSE PREVENTION I: RESEARCH AND THEORY.** 3 credits, tuition\*: Resident \$258; Non-resident \$748.20; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

First of three-course sequence on prevention of child abuse and neglect, provides conceptual (research and theory) framework for developing primary and secondary preventive interventions. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr, Sec 1, Th, 4-7, Ahlquist

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**SW 5302 CHILD ABUSE PREVENTION II: PROGRAM DEVELOPMENT, IMPLEMENTATION, AND EVALUATION.** 3 credits, tuition\*: Resident \$258; Non-resident \$748.20; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Second of three-course sequence on prevention of child abuse and neglect, providing skills for program design; implementation, and evaluation for children at risk. (Prereq 5301. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr, Sec 2, Th, 4-7, Ahlquist

**SW 5303 CHILD ABUSE PREVENTION III: STRATEGIES FOR POLICY AND SYSTEMS CHANGE.** 3 credits, tuition\*: Resident \$258; Non-resident \$748.20; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Third of three-course sequence on prevention of child abuse and neglect, providing understanding of social policy and systems change for children at risk. (Prereq 5302. Qualified students may register for graduate credit at the University of Minnesota) Spring Qtr, Sec 1, Th, 4-7, Ahlquist

### Sociology (Soc)

(909 Social Sciences: 624-4300)

#### College of Liberal Arts

Textbooks for most Soc courses are available at University of Minnesota Bookstore—West Bank (625-3000).

(See also General College courses in social and behavioral sciences; Family Social Science; Political Science; Social Work; and Compleat and Practical Scholar noncredit courses)

William Brustein, Professor  
Richard Sykes, Professor of Speech-Communication, Associate in Sociology

**Most courses for a major in sociology are available through Extension Classes. For information about completing a major in sociology, call the sociology department academic adviser (624-4300). Students can complete the major after a limited amount of day school attendance.**

**Restriction in Sociology classes**—A student who does not attend the first class session will, at the instructor's discretion, not be allowed to continue.

If it is not possible to attend the first class session, the student should contact the instructor in advance to make necessary arrangements to hold a place in class. Telephone the Department of Sociology at (612) 624-4300 for further information.

### I. B.A. Major Sequence, General Option

#### A. Major Requirements

1001, 3201 or 3201H, 3401 or 3401H

3801, 3802, 3803 (should be taken soph yr if possible)

A theory course from 5701, 5703, 5705, 5711

16 additional 3000- or 5000-level sociology cr (typically 4 courses)

4 credits of major project after all required major course work and upper division composition course are completed (major project must be completed through day school)

#### B. Major Requirements for Sociology of Law, Criminology, and Deviance Option For the B.A. Degree:

1001, 3201 or 3201H or 3401 or 3401H

3801, 3802, 3803 (should be taken soph yr if possible)

5701 or 5703 or 5705 or 5711

3101, 3102

Three courses chosen from 5101, 5102, 5104, 5105, 5107, 5108, 5109, 5111, 5114, 5125, 5135, 5141, 5142, 5147, 5148, 5149, 5161, 5162 (5111 is offered through Extension Classes in 1995-96)

4 credits of major project after all required major course work and upper division composition course are completed (major project must be completed through day school)

### II. B.S. Major Sequence

#### Major Requirements

1001, 3201, 3401, 3801, 3802, 3803

One of the following: 5701, 5703, 5705, 5711

16 credits of 3000- or 5000-level sociology electives (typically 4 courses)

4 credits of required research design in sociology (must be completed through the day school)

27 credits from list of required supportive field courses, including a two-quarter sequence (minimum 8 credits) in one area (list available from the Sociology Department advisor: 624-4300)

### III. General Information

Students should check with the undergraduate advisor as early as possible in their college careers for information about declaring the major. Majors must submit a program proposal, prepared after meeting

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

with the sociology undergraduate advising office. Call (612) 624-4300 to arrange to attend an information meeting about the major.

Registration in all major requirements including supportive courses must be A-F unless the course is only offered S-N. Students must maintain a C average in sociology courses, and receive at least a C in all supportive courses for the B.S. sequence.

A maximum of 5 credits of D are acceptable in sociology courses.

Students are advised to register as soon as possible (preferably as sophomores) for 3801, 3802, and 3803.

The Department of Sociology offers an honors degree in day school through the Honors Division of CLA. For more information, students should inquire in the Honors Program Office, 115 Johnston Hall, 624-5522. Honors sections of 1001(H), 3201(H), 3401(H), 3801(H), 3802(H), 3803(H), 3991H, and the honors proseminar for preparation of the honors thesis are offered only through day school.

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

Students interested in a minor in sociology through day school should contact the sociology adviser at (612) 624-4300. The general minor sequence in sociology is available in the evening.

**Joint Day/Extension Classes**—Extension students must register for Extension offerings of sociology courses; however, in a given quarter, if a course is offered through day school only, and not in Extension Classes, an exception may be granted. With the exception of Soc 1001, when a course is offered through both Extension and day school during the same quarter, Extension students can register for the Extension course only. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**Continuing Education for Women (CEW) section available in the following course:** Soc 3501

**Soc 1001 INTRODUCTION TO SOCIOLOGY.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Introduction to the scientific study of social behavior. Overview of the major theories, methods, concepts, and research findings. Examination of the characteristics of the basic social units (social relations, groups, organizations, institutions, society), their patterns of interrelation, and processes of change. (No prereq)

Fall Qtr, Sec 1, T, 6:20-8:50, AndH 270, Brustein  
Winter Qtr, Sec 2, M, 6:20-8:50, AndH 270  
Spring Qtr, Sec 3, Th, 6:20-8:50, AndH 270

**Soc 1003 SOCIAL PROBLEMS.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Sociological analysis of major contemporary problems; theory behind the causes, discussion of methods for studying them, and analysis of potential solutions. Problems may include poverty, racial discrimination, inequality, sex roles, crime, drugs, population problems, and pollution. (No prereq)  
Spring Qtr, Sec 1, M, 6:20-8:50, AndH 210

**Soc 1004 AMERICAN RACE RELATIONS.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Sociological overview of relations between American racial minorities (Afro-American, Chicano, Native American, Asian) and the dominant majority. Consideration of migration and settlement patterns; community and family life; gender roles; education and labor force participation, inequalities in wealth, status, health, and welfare; discrimination and institutional racism; public policy responses. (No prereq)  
Winter Qtr, Sec 1, W, 6:20-8:50, AndH 230

**Soc 3101 (formerly CJS 3101) INTRODUCTION TO AMERICAN CRIMINAL JUSTICE.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Components and dynamics of the criminal justice system as well as its philosophical underpinnings. (No prereq)

Fall Qtr, Sec 1, W, 6:20-8:50, AndH 210

**Soc 3102 INTRODUCTION TO CRIMINAL BEHAVIOR AND SOCIAL CONTROL.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Introduction to the basic issues in criminology and the sociology of law and social control organizations. (Prereq 3101 or equivalent)

Winter Qtr, Sec 1, W, 6:20-8:50, BlegH 225

**Soc 3201 PRINCIPLES OF SOCIAL PSYCHOLOGY.** 5 credits, \$3506, tuition\*: Resident \$430; Non-resident \$1247.

Ideas and findings related to social psychology; experience in developing empirically based knowledge in social science. (Prereq 1001 or equivalent. Limited to 20)

Fall Qtr, ★Sec 1, M, Lect, 6-8:30, AndH 310; T, Lab, 6:15-8, BlegH 155

Fall Qtr, ★Sec 2, M, Lect, 6-8:30, AndH 310; W, Lab, 6:15-8, BlegH 420

(See also REX 0606, Do We Know Who Our Friends Are? Accurate Perception of Social Networks)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Soc 3401 PRINCIPLES OF SOCIAL ORGANIZATION.** 5 credits, \$3505, tuition\*: Resident \$430; Non-resident \$1247.

How and why social organization is possible. Major concepts and theories of social structure, primary forms of social organization (groups, communities, networks, formal organizations), basic social processes (integration, differentiation, regulation, change), and how social organization evolves from individual decision making. Course content varies. (Prereq 1001, 3801 or equivalent. Limited to 20)

Winter Qtr, ★Sec 1, M, Lect, 6-8:30, BlegH 130; T, Lab, 6:15-8, BlegH 120

Winter Qtr, ★Sec 2, M, Lect, 6-8:30, BlegH 130; W, Lab, 6:15-8, BlegH 250

**Soc 3405 INEQUALITY: INTRODUCTION TO STRATIFICATION.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Inequality—causes, dimensions, and consequences. Inequality in American society—class, gender, and race; cross-national patterns of inequality; relationship between economic and political inequality; role of schools in transmission of inequality; public policies affecting inequality. (Prereq 1001)

Winter Qtr, Sec 1, T, 6:20-8:50, BlegH 155, Brustein

**Soc 3501 THE FAMILY SYSTEM.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Study of the family in contemporary American society with special attention to historical and cross-cultural comparisons; interrelationships with other social institutions, socialization, patterns of mate selection, life cycle processes and norms of human sexuality. (Prereq 1001 or #)

Winter Qtr, Sec 1, F, 9:30 a.m.-12, MacP.

*Offered through Continuing Education for Women*

Spring Qtr, Sec 2, M, 6:20-8:50, BlegH 235

(See also CSch 0308, Families; and REX 0502, Relationships in Adoptive Families)

**Soc 3503 SEX, ROMANCE, AND RELATIONSHIPS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Sociological, historical, and feminist perspectives on gender relationships and personal life; ideas of masculinity and femininity; the social and historical construction of love and romance, intimacy, emotional and personal life, and sexuality. (Prereq 1001)

Fall Qtr, Sec 1, M, 6:20-8:50, RarigC 616

(See also PSch 0840, Identity and Intimacy in Close Relationships)

**Soc 3801 SOCIOLOGICAL METHODS I: DESCRIPTIVE STATISTICS.** 5 credits, tuition\*: Resident \$430; Non-resident \$1247.

Descriptive statistics in analysis of sociological data, measures of central tendency, deviation, correlation and regression graphs, simple treatment of three and four variables. (Prereq intermediate algebra or GC 0631. Limited to 25)

Fall Qtr, ★Sec 1, TTh, Lect, 6:30-7:45, BlegH 130; TTh, Lab, 5:15-6:15, BlegH 90

Fall Qtr, ★Sec 2, TTh, Lect, 6:30-7:45, BlegH 130; TTh, Lab, 8-9, BlegH 90

Fall Qtr, ★Sec 3, TTh, Lect, 6:30-7:45, BlegH 130; TTh, Lab, 8-9, BlegH 440

**Soc 3802 SOCIOLOGICAL METHODS II: STATISTICAL INFERENCE.** 5 credits, tuition\*: Resident \$430; Non-resident \$1247.

Statistical inferences, probability, hypothesis tests, use of statistical reasoning in analysis of sociological data. (Prereq 3801 or equivalent. Limited to 25)

Winter Qtr, ★Sec 1, TTh, Lect, 6:30-7:45, BlegH 150; TTh, Lab, 5:15-6:15, BlegH 440

Winter Qtr, ★Sec 2, TTh, Lect, 6:30-7:45, BlegH 150; TTh, Lab, 8-9, BlegH 440

**Soc 3803 SOCIOLOGICAL METHODS III: RESEARCH METHODS.** 5 credits, tuition\*: Resident \$430; Non-resident \$1247.

Principles of research design, data collection, and analysis focusing on field observation and survey design and analysis. Practice in data collection and analysis. (Prereq 3801, 3802 or equivalent or #. Limited to 25)

Spring Qtr, ★Sec 1, TTh, Lect, 6:30-7:45, BlegH 130; TTh, Lab, 5:15-6:15, BlegH 440

Spring Qtr, ★Sec 2, TTh, Lect, 6:30-7:45, BlegH 130; TTh, Lab, 8-9, BlegH 440

**Soc 3951 COMPARATIVE ETHNIC GROUP RELATIONS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Theories of ethnic stratification. Relations of minorities and elites viewed in historical and cross-cultural comparative perspective, examining the United States and other countries (e.g., South Africa, Mexico). (Prereq 1001 or #)

Fall Qtr, Sec 1, Th, 4-6:30, NichH 213, Sykes

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**Soc 3954 SOCIOLOGICAL PERSPECTIVES ON RACE, CLASS, AND GENDER.** 4 credits, §Afro 3954, tuition\*: Resident \$344; Non-resident \$997.60.

Societal-level analysis of race, class, and gender inequality. How the three forms of inequality operate independently and in conjunction with one another in American institutions and society. (No prereq)

Spring Qtr, Sec 1, Th, 6:20-8:50, AndH 350

**Soc 5111 SOCIOLOGY OF DEVIANT BEHAVIOR.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

The nature of deviant behavior, the social process associated with the careers of deviants, and the relationship of deviancy to problems of social control. (Prereq 3101-3102 or #. Inquire about graduate credit when registering)

Spring Qtr, Sec 1, W, 6:20-8:50, BlegH 10

**Soc 5705 BACKGROUNDS OF MODERN SOCIAL THOUGHT.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Originators of modern sociological theory examined through original texts: Marx, Weber, Durkheim, Freud, and Gilman. Division of labor, social cohesion and social control, gender and social reproduction, class relations and the social organization of production, norms and values, and history. (Prereq 8 cr in social sciences or #. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr, Sec 1, W, 6:20-8:50, Law 1, Brustein

**Soc 5960 MULTIDISCIPLINARY PERSPECTIVES ON AGING.** 4 credits, §AdEd 5440, Educ 5440, CPsy 5305, HSU 5009, PA 5414, PubH 5737, SW 5024, Phar 5009, SAHP 5009, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

A multidisciplinary introduction to aging and the aging process. Topics include biological, social, psychological aspects of aging; theories of aging; death and bereavement; issues and problems of older adults in America; human services and their delivery systems such as social services, health, nutrition, long-term care, and education; public policy and legislation; environments and housing; advocates; retirement. The AUCA-sponsored course is being offered by a number of departments. Students may register for the course through the depart-

ment of their choice as noted. For information, contact Prof. Donald McTavish in Sociology, 624-4300. *Students who want graduate credit should register for one of the following: AdEd 5440, CPsy 5305, Nurs 5780, PA 5414, PubH 5737, SW 5024, or Soc 5960. Students who want undergraduate credit should register for Phar 5009 or HSU 5009.* (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with AdEd 5440, CPsy 5305, HSU 5009, Phar 5009, PA 5414, PubH 5737, SW 5024. A joint Day/Extension class)

Fall Qtr, ★Sec 1, MW, 4:40-6:25, MoosT 2-690

(Limited to a combined total of 37 Extension students)

Spring Qtr, ★Sec 2, MW, 4:40-6:25, MoosT 2-690

## Soil, Water, and Climate (Soil)

(439 Borlaug Hall: 625-1244)

### College of Agricultural, Food, and Environmental Sciences

Textbooks for most Soil courses are available at University of Minnesota Bookstore—St. Paul (624-9200).

For information about the new Solid Waste Management Certificate offered through Continuing Education and Extension/University College, see page 530.

(See also Horticulture; Practical Scholar; and Research Explorations)

James L. Anderson, Professor

Jay Bell, Assistant Professor

Paul R. Bloom, Professor

Terence Cooper, Professor

Thomas Halbach, Associate Professor

**Soil 1020 THE SOIL RESOURCE.** 5 credits, §5022, tuition\*: Resident \$397.50; Non-resident \$1152.75.

Introduction into the physical, chemical and microbiological properties of soil. Use of the soil classification system to understand the use of soil survey information for land use planning. Concepts of soil fertility for understanding environmental planning and conservation decisions. (No prereq. Meets concurrently with 5022. Limited to 25)

Fall Qtr, ★Sec 1, TTh, 6:20-9:20, BorH 375, StP Campus, Cooper

(See also ID 5525-5526, Garbage, Government, and the Globe)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Soil 5022 INTRODUCTORY SOIL SCIENCE FOR TEACHERS.** 4 credits, \$1020, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

See description for Soil 1020. (Prereq 1 course in college chemistry, a degree in education or #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 1020. Limited to 5)

Fall Qtr, ★Sec 1, TTh, 6:20-9:20, BorH 375, StP Campus, Cooper

**Soil 5310 SOIL CHEMISTRY.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Chemical processes in soil; composition of soil minerals and organic matter, solubility equilibria, adsorption/desorption, ion exchange, formation of soluble complex's, oxidation/reduction, acidity, alkalinity. Discusses solution of problems related to environmental degradation, plant nutrition and soil genesis. For further information, telephone Prof. Paul Bloom at (612) 625-4711. (Prereq Chem 3100 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr, ○Sec 1, MWF, 4:05-4:55, BorH 375, StP Campus, Bloom

**Soil 5555 WETLAND SOILS.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Morphology, chemistry, hydrology, and formation of mineral and organic soils in wet environments. Soil indicators of wet conditions and techniques for identifying hydric soils for wetland delineations. Field trips and delineation exercise; emphasis on peatlands; wetland benefits, preservation, regulation, and mitigation. Course materials is not of an introductory nature and assumes prior knowledge of soil science and the ability to integrate information from several disciplines in order to understand wetland processes. **Must be taken A-F.** (Prereq 1020, 3125 and 5510 or #. Lectures meet concurrently. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Fall Qtr, ★○Sec 1, Lect, TTh, 4:30-5:45, BorH 365, StP Campus, Anderson, Bell; Rec, M, 4:05-4:55, Soils S415, StP Campus

Fall Qtr, ★○Sec 2, Lect, TTh, 4:30-5:45, BorH 365, StP Campus, Anderson, Bell; Rec, T, 3-3:50, BorH 375, StP Campus

Spring Qtr, ★○Sec 3, Lect, TTh, 4:30-5:45, BorH 365, StP Campus, Bell, Anderson; Rec, M, 4:05-4:55, Soils S415, StP Campus

Spring Qtr, ★○Sec 4, Lect, TTh, 4:30-5:45, BorH 365, StP Campus, Bell, Anderson; Rec, T, 3-3:50, BorH 375, StP Campus

**Soil 5600 PRINCIPLES OF WASTE MANAGEMENT.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Understanding the issues, problems, and solutions in remediating the waste stream generated by today's society. Topics include waste stream dynamics, municipal solid waste and yard waste composting, waste to energy incineration operation, ash disposal, recycling, landfill requirements, requirements for direct land disposal, regulatory trends, and case studies. (Prereq Biol 1009 or Biol 1201, Biol 1202 or Chem 1051, Stat 3011 or #. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr, Sec 1, T, 6:30-8:50, BorH 365, StP Campus, Halbach

## South Asian and Middle Eastern Languages and Cultures

See Area Studies Programs; and the Institute of Languages and Literatures

## SPAN

See Student Project for Amity Among Nations

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



**Spanish (Span)**

(34 Folwell Hall: 625-5858)

Spanish and Portuguese

**College of Liberal Arts**

Textbooks for most Span courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

(See also Portuguese; History; PSch 0742, Spanish for Travelers; and REX 0512, The Evolution of the Spanish Press Under Democracy)

René Jara, Professor

Carol Klee, Associate Professor

Francisco Ocampo, Assistant Professor

Joanna O'Connell, Associate Professor

Luis Ramos-García, Assistant Professor

Louise Mirrer, Professor and Chair

Antonio Ramos-Gascón, Professor

Nicholas Spadaccini, Professor

Constance Sullivan, Associate Professor

Hernán Vidal, Professor

Anthony N. Zahareas, Professor

**Read about language laboratories fees on page 485.**

**Language Help Sessions**—Extension Classes provides language help sessions for students enrolled in beginning (1101-1102-1103) and intermediate (1104-1105-1106) Extension courses in Spanish. In these sessions, tutors are available to assist students with language problems as well as with language practice. (No appointment is necessary.) Times and locations for each help session are announced by the language instructor at the beginning of each quarter.

**Continuing Education for Women (CEW) sections available in the following courses:** Span 1101, 1102, 1103

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Spanish and Portuguese. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

*Students who have had no Spanish should enroll in Span 1101. Those CLA students who have already studied Spanish are required to take a proficiency exam before enrolling. Contact the Proficiency Testing Office for details on testing dates (624-0862).*

**Span 1101-1102-1103 BEGINNING SPANISH**, carrying 5 degree credits per unit, comprises the standard course in first-year Spanish. The principal aim of the course is to teach students to understand and speak Standard Spanish so that they can communicate in Spain, Spanish America, and among U.S. Spanish-speaking minority groups. As students progress 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.

**Span 1101-1102-1103 BEGINNING SPANISH**. 5 credits each quarter, tuition\* each quarter: Resident \$397.50; Non-resident \$1152.75. (IS)

Basic listening, speaking, reading, and writing skills. Stress on the development of communicative competence. Some cultural readings. (No prereq for 1101; 1101 or # for 1102; 1102 or # for 1103. Limited to 25)

Fall Qtr, 1101, ★Sec 1, MW, 6:10-8:15, AkerH 317

Fall Qtr, 1101, ★Sec 2, MW, 6:10-8:15, AkerH 313

Fall Qtr, 1101, ★Sec 3, MW, 6:10-8:15, KoltH S135

Fall Qtr, 1101, ★Sec 4, TTh, 9:10-11:15 a.m., MacP. Offered through Continuing Education for Women

Fall Qtr, 1101, ★Sec 5, TTh, 6:10-8:15, AmundH 116

Fall Qtr, 1101, ★Sec 6, TTh, 6:10-8:15, SmithH 121

Fall Qtr, 1101, ★Sec 7, TTh, 6:10-8:15, AmundH 120

Winter Qtr, 1101, ★Sec 8, MW, 6:10-8:15, SmithH 111

Winter Qtr, 1101, ★Sec 9, TTh, 6:10-8:15, AmundH 120

Winter Qtr, 1102, ★Sec 1, MW, 6:10-8:15, AkerH 309

Winter Qtr, 1102, ★Sec 2, MW, 6:10-8:15, AkerH 211

Winter Qtr, 1102, ★Sec 3, MW, 6:10-8:15, AkerH 215

Winter Qtr, 1102, ★Sec 4, TTh, 9:10-11:15 a.m., MacP. Offered through Continuing Education for Women

Winter Qtr, 1102, ★Sec 5, TTh, 6:10-8:15, FolH 218

Winter Qtr, 1102, ★Sec 6, TTh, 6:10-8:15, FolH 234

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

Winter Qtr, 1102, ★Sec 7, TTh, 6:10-8:15, FolH 246

Spring Qtr, 1101, ★Sec 10, MW, 6:10-8:15, AmundH 158

Spring Qtr, 1101, ★Sec 11, TTh, 6:10-8:15, AmundH 158

Spring Qtr, 1102, ★Sec 8, MW, 6:10-8:15, AmundH 120

Spring Qtr, 1102, ★Sec 9, TTh, 6:10-8:15, FolH 419

Spring Qtr, 1103, ★Sec 1, MW, 6:10-8:15, AkerH 313

Spring Qtr, 1103, ★Sec 2, MW, 6:10-8:15, KoltH S133

Spring Qtr, 1103, ★Sec 3, MW, 6:10-8:15, KoltH S132

Spring Qtr, 1103, ★Sec 4, TTh, 9:10-11:15 a.m., MacP. Offered through Continuing Education for Women

Spring Qtr, 1103, ★Sec 5, TTh, 6:10-8:15, AmundH 120

Spring Qtr, 1103, ★Sec 6, TTh, 6:10-8:15, KoltH S140

Spring Qtr, 1103, ★Sec 7, TTh, 6:10-8:15, Phys 236A

**Span 1104 INTERMEDIATE SPANISH.** 5 credits, tuition\*: Resident \$397.50; Non-resident \$1152.75. (IS)

Speaking and comprehension; development of reading and writing skills based on materials from Spain and Spanish America. Grammar review; compositions and oral presentations. (Prereq 1103 or 1205 or #. Limited to 25)

Fall Qtr, ★Sec 1, MW, 6:10-8:15, KoltH S132

Fall Qtr, ★Sec 2, TTh, 6:10-8:15, AkerH 317

Fall Qtr, ★Sec 3, MW, 6:10-8:15, KoltH S140

Spring Qtr, ★Sec 4, MW, 6:10-8:15, AkerH 309

**Span 1105 INTERMEDIATE SPANISH.** 5 credits, tuition\*: Resident \$397.50; Non-resident \$1152.75. (IS)

For description, see 1104. (Prereq 1104 or #. Limited to 25)

Fall Qtr, ★Sec 1, MW, 6:10-8:15, AkerH 319

Fall Qtr, ★Sec 2, TTh, 6:10-8:15, KoltH S132

Winter Qtr, ★Sec 3, TTh, 6:10-8:15, AkerH 317 (Limit 50)

Winter Qtr, ★Sec 4, MW, 6:10-8:15, Arch 45

**Span 1106 INTERMEDIATE SPANISH.** 5 credits, tuition\*: Resident \$397.50; Non-resident \$1152.75. (IS)

Speaking and comprehension; development of reading and writing skills based on materials from Spain and Spanish America. Grammar review; composi-

tions and short presentations. (Prereq 1105 or #. Limited to 25)

Winter Qtr, ★Sec 1, MW, 6:10-8:15, MurH 308 (Limit 50)

Spring Qtr, ★Sec 2, MW, 6:10-8:15, AmundH 104 (Limit 50)

Spring Qtr, ★Sec 3, TTh, 6:10-8:15, AkerH 313

**Span 1503 CULTURE, CIVILIZATION OF MODERN LATIN AMERICA: SOCIETIES IN CHANGE.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Cultural implications arising from struggles for political and economic independence during the 19th and 20th centuries. Cultural characteristics of principal regions of contemporary Latin America. Causes of developmental differences. Taught in English. (No prereq. May not be used for Spanish or Portuguese major credit)

Winter Qtr, Sec 1, M, 6:10-9:30, FolH 340

**Span 3015 SPANISH COMPOSITION AND COMMUNICATION.** 5 credits, tuition\*: Resident \$430; Non-resident \$1247.

Emphasis on the development of communication skills, i.e. the ability to comprehend both written and spoken texts, and to speak and write in Spanish beyond the intermediate level. (Prereq 1106 or equivalent and Graduation Proficiency Exam. Limited to 20)

Fall Qtr, ★Sec 1, MW, 6:10-8:15, FolH 138

Fall Qtr, ★Sec 2, TTh, 6:10-8:15, FolH 234

Winter Qtr, ★Sec 3, MW, 6:10-8:15, FolH 240

**Span 3016 ADVANCED SPANISH COMPOSITION AND COMMUNICATION.** 5 credits, tuition\*: Resident \$430; Non-resident \$1247.

Builds on 3015. Continued emphasis on the development of communication skills, i.e. the ability to comprehend both written and spoken texts, and to speak and write in Spanish beyond the intermediate level. (Prereq 3015 or equivalent. Limited to 20)

Winter Qtr, ★Sec 1, MW, 6:10-8:15, FolH 208

Spring Qtr, ★Sec 2, MW, 6:10-8:15, FolH 134

**Span 3022 BUSINESS SPANISH.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Emphasizes building a vocabulary of Spanish business terms, developing skills in report writing, and learning the proper format for business and other formal communications. Developing conversational fluency on trade-related topics is stressed. (Prereq 1105 or equivalent. Limited to 25)

Spring Qtr, ★Sec 1, W, 6:10-8:40, FolH 104

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**Span 3104 THE ART OF READING LITERARY TEXTS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Critical reading of Spanish and Spanish-American texts; works representing principal genres—novel, drama, poetry, essay; diverse approaches to literature. Terminology of criticism, literary problems and techniques. (Prereq 3002 or #. Limited to 15)  
 Winter Qtr, ★Sec 2, Th, 6:10-8:40, FolH 148  
 Spring Qtr, ★Sec 1, Th, 6:10-8:40, FolH 326

**Span 3605 POLITICS IN SPANISH AND LATIN AMERICAN LITERATURE.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

The civil wars in Spain; national liberation movements and political upheavals in Latin America. Taught in English. (No prereq. May not be used for Spanish or Portuguese major credit. Limited to 50)  
 Spring Qtr, ★Sec 1, M, 6:10-8:40, FolH 138

(See also History)

**Span 3614 DON QUIXOTE: A STUDY OF LOST ILLUSIONS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Analysis of Cervantes' *Don Quixote* and an examination of its reception from early 1600s to modern times. Book's reception in Spanish America. Taught in English. *May not be used for Spanish or Portuguese major credit.* (No prereq. Limited to 50)  
 Fall Qtr, ★Sec 1, T, 6:10-8:40, FolH 134

**Span 3950 FIGURES IN SPANISH-AMERICAN LITERATURE.** 4 credits this offering (maximum 12 cr), tuition\*: Resident \$344; Non-resident \$997.60.

One major writer or group of writers whose work has had an impact on thought, literature, or social problems. (Prereq 3104 or #)  
 Winter Qtr, Sec 1, T, 6:10-8:40, FolH 148

### 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, tuition\*: \$318. (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. Limited to 26)

Winter Qtr, ★Sec 1, T, 6:20-8:40, FolH 419

*Spanish 0221 is also offered as a Summer Extension Class*

### Spanish-Portuguese (SpPt)

(34 Folwell Hall: 625-5858)

Spanish and Portuguese

**College of Liberal Arts**

Textbooks for most SpPt courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

**Joint Day/Extension Classes**—You may register through Extension for most day school classes scheduled before 4 p.m. in Spanish-Portuguese. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

*No SpPt courses offered through Extension Classes 1995-96*

### Speech-Communication (Spch)

(460 Folwell Hall: 624-5800)

**College of Liberal Arts**

Textbooks for most Spch courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

(See also English; General College; Compleat and Practical Scholar noncredit courses; Linguistics; Journalism; and Rhetoric)

Dean Hewes, Professor  
 Patricia Kovel-Jarboe, Lecturer  
 David Rarick, Associate Professor

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Most courses needed for a major in Speech-Communication can be completed in the evening.**

Most courses required in the undergraduate major are offered over a two-year period of time. Interested students should discuss plans with a CEE adviser (625-2500). Students deciding to work for the major should confer with a departmental adviser early in their work (call 624-5800 for an appointment). (See the Degrees and Certificates section of this Bulletin for information on a master's degree in speech-communication.)

### **B.A. Major sequence**

*Required Preparatory Courses:* 1101, 1102. These courses are offered yearly.

Major Requirements (Effective Sept. 16, 1990)

Minimum of 36 3xxx-5xxx cr in speech-communication to include: 3211, 3401 and 3601 (may not include 3970, 3980, "X" registrations). Also, two courses at 3xxx level in composition, as well as a research requirement: Spch 3501 or an out-of-department course in research methods (a list of such courses is available in the department's Undergraduate Advising Office, 432 Folwell Hall). The composition and research requirements are *in addition to* the minimum of 36 3xxx-5xxx cr in speech-communication.

To qualify for admission to the Speech-Communication major, students must complete five courses: Spch 1101, 1102, 3211, 3401, and 3601, and earn an average grade of 2.33 across the three 3xxx courses. Students wishing to emphasize speech-communication in IDIM, BIS, UWW, and other individually designed programs must achieve a 2.50 grade-point average in any two of these four courses: Spch 1102, 3211, 3401, and 3601.

The program must be planned in conference with and approved by a departmental major adviser. Students are encouraged to see department advisers quarterly.

Although many courses are offered in evening classes, the selection a student will have will be limited.

*A minor is also available in Speech-Communication. Interested students should contact CEE Counseling, 625-2500.*

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Speech-Communication. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**Continuing Education for Women (CEW) section available in the following course:** Spch 1101

**You must attend the entire first Spch class session or your space in that class will be forfeited.**

**Spch 1101 FUNDAMENTALS OF SPEECH-COMMUNICATION: ORAL COMMUNICATION.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

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 23)

Fall Qtr, ★Sec 1, M, 9 a.m.-12, MacP. Offered through Continuing Education for Women

Fall Qtr, ★Sec 2, W, 6-9, FolH 419

Winter Qtr, ★Sec 3, T, 6-9, FolH 318

Winter Qtr, ★Sec 4, Th, 6-9, FolH 419

Spring Qtr, ★Sec 5, M, 6-9, FolH 326

Spring Qtr, ★Sec 6, Th, 6-9, FolH 318

**Spch 1102 FUNDAMENTALS OF SPEECH-COMMUNICATION: COMMUNICATION PROCESS.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Introduction to the identification and analysis of variables in intrapersonal, interpersonal, and group communication. (No prereq)

Winter Qtr, Sec 1, W, 6-9, NichH 213

Spring Qtr, Sec 2, W, 6-9, FolH 306

**Spch 1313 ANALYSIS OF ORAL ARGUMENT.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Strategies for analyzing and evaluating arguments received aurally. Problems in listening and responding to argument. (No prereq. Limited to 23)

Fall Qtr, ★Sec 1, Th, 6-9, FolH 312

Winter Qtr, ★Sec 2, Th, 6-9, FolH 312

Spring Qtr, ★Sec 3, Th, 6-9, FolH 312

**Spch 3111 LEADERSHIP COMMUNICATION.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Interdisciplinary study of theory and practice of leadership. Theoretical approaches to management. Interpersonal communication skills in leadership practice; persuasion and cross-value communication in effective leadership. Experience in task-oriented small group communication. (No prereq. Limited to 35)

Fall Qtr, ★Sec 1, M, 6-9, FolH 326

Winter Qtr, ★Sec 2, M, 6-9, FolH 419

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**Spch 3211 DETERMINANTS OF BROADCAST PROGRAMMING.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Historical development and contemporary aspects of broadcast programming. How governmental, industrial, and public organizations influence program decisions. "Problem" areas of programming. (No prereq. Limited to 100)

Spring Qtr, ★Sec 1, M, 6-9, FolH 306

**Spch 3401 THEORIES OF PERSON TO PERSON COMMUNICATION.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Theories of interpersonal communication and their usefulness for particular purposes. (Prereq 1102 or #, Psy 1001. Limited to 50)

Spring Qtr, ★Sec 1, W, 6-9, FolH 208, Hewes

**Spch 3402 COMMUNICATION IN RELATIONSHIPS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

A discussion of the effects of communication on the definition and development of friendships and romantic relationships. (Prereq 1102. Limited to 50)

Fall Qtr, ★Sec 1, M, 6-9, FolH 208, Hewes

(See also PSch 0841, Man Talk, Woman Talk: Bridging the Gender Communication Gap)

**Spch 3411 SMALL GROUP COMMUNICATION PROCESSES.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Cooperative thinking in task-oriented groups. Planning, preparing for, participating in, and leading private and public meetings. *May require group meetings outside regularly scheduled class hours listed below.* (Prereq 1101 or #. Limited to 22)

Fall Qtr, ★Sec 1, T, 6-9, FolH 318

Winter Qtr, ★Sec 2, Th, 6-9, FolH 318

Spring Qtr, ★Sec 3, T, 6-9, FolH 326

(See also REX 0605, Network Differences in Groups)

**Spch 3431 THE ROLE OF PERSUASION IN THE MODERN WORLD.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Persuasion in interpersonal, organizational, intracultural, and intercultural relationships. Contemporary and historical comparisons and contrasts. Design and implementation of projects. (No prereq. Sophomore standing recommended. Limited to 30)

Fall Qtr, ★Sec 1, Th, 6-9, FolH 318

**Spch 3441 COMMUNICATING IN ORGANIZATIONS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Theory and practice of communicating in organizations. How communication creates, maintains, and changes organizational culture. Role of individual communicator in organizational culture. (Prereq 1101 or 1102 or equivalent. Limited to 22)

Winter Qtr, ★Sec 1, W, 6-9, FolH 312

Spring Qtr, ★Sec 2, T, 6-9, FolH 318

**Spch 3451 INTERCULTURAL COMMUNICATION: THEORY AND PRACTICE.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Theories of and factors influencing intercultural communication. Development of effective intercultural communication skills. (Prereq planning an intercultural experience. Limited to 20)

Winter Qtr, ★Sec 1, T, 6-9, FolH 312

**Spch 3501 INTRODUCTION TO COMMUNICATION RESEARCH METHODS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Introduction to quantitative research methods in speech-communication, to include design of communication experiments, surveys, interaction coding, content analysis, observational research, and relevant statistical methods. (Prereq 3401. Limited to 100)

Winter Qtr, ★Sec 1, M, 6-9, NichH 213

**Spch 3601 APPROACHES TO PUBLIC DISCOURSE.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Survey of theoretical systems intended to explain or direct the creation of public discourse. Traditional rhetorics to contemporary perspectives. Using theory to explain the practice of public discourse. (Prereq 1101. Limited to 100)

Winter Qtr, ★Sec 1, T, 6-9, FolH 306

**Spch 5405 NONVERBAL COMMUNICATION: THEORY AND RESEARCH.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Nonverbal interpersonal communication. Nonverbal categories: gesture, facial expression, posture, clothing, environment. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 20)

Fall Qtr, ★Sec 1, T, 6-9, FolH 419, Sykes

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**Spch 5422 INTERVIEWING AND COMMUNICATION.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

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 in social science or #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 24)

Winter Qtr, ★Sec 1, M, 6-9, FolH 312, Kovel-Jarboe

Spring Qtr, ★Sec 2, M, 6-9, FolH 419, Rarick

(See also Rhet 5258, Interviewing: Dynamics of Face-to-Face Communication)

**Spch 5441 COMMUNICATION IN HUMAN ORGANIZATIONS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Analysis of functions of communication in organizational settings. Organizational structure and dynamics and their effect upon communication process. Collateral readings and individual projects. (Prereq 3401 or 8 cr in social sciences, 3441 or #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25)

Fall Qtr, ★Sec 1, W, 6-9, FolH 334

**Spch 5443 THEORIES OF ORGANIZATIONAL COMMUNICATION.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Survey of theories of organizational communication and relevant empirical research. Implications of these theories for modern organizations, their members, and society. (Prereq 5441. Qualified students may register for graduate credit at the University of Minnesota. Limited to 20)

Spring Qtr, ★Sec 1, W, 6-9, FolH 318, Kovel-Jarboe

## Statistics (Stat)

(270a Vincent Hall: 625-8046)

### College of Liberal Arts

Textbooks for Stat courses available at University of Minnesota Bookstore—St. Paul (624-9200) for classes on that campus; at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000) for classes on the Minneapolis campus.

(See also GC 1454, Statistics; and PSch 0660, Taking the Sting Out of Stats: Preparing for Graduate Statistics)

Douglas Hawkins, Professor of Statistics  
Bernard Lindgren, Professor of Statistics  
Frank Martin, Associate Professor of Statistics

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Statistics. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**Stat 1001 INTRODUCTION TO IDEAS OF STATISTICS.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20. (IS)

Controlled vs observational studies; presentation and description of data; correlation and causality; sampling; accuracy of estimates; tests. (Prereq HS algebra. Limited to 40)

Fall Qtr, ★Sec 1, M, 6:20-8:50, VinH 207

Fall Qtr, ★Sec 2, T, 6:20-8:50, ClaOff B25, StP Campus

Winter Qtr, ★Sec 3, M, 6:20-8:50, VinH 206

Winter Qtr, ★Sec 4, T, 6:20-8:50, ClaOff B35, StP Campus

Spring Qtr, ★Sec 5, M, 6:20-8:50, HckrH 100, StP Campus (Limit 60)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**Stat 3011-3012 STATISTICAL ANALYSIS.** 4 credits each quarter, tuition\* each quarter: Resident \$344; Non-resident \$997.60.

Descriptive statistics; elementary probability; estimation; one- and two-sample tests; correlation; regression; ANOVA; randomized blocks; multiple comparisons; factorial experiments; multiple regression; goodness of fit; nonparametric methods; contingency tables; selected topics. (Prereq college algebra. Limited to 20)

Fall Qtr, 3011, ★Sec 1, W, 6:20-8:50, VinH 2 (Limit 40)

Fall Qtr, 3011, ★Sec 2, Th, 6:20-8:50, VinH 2 (Limit 40)

Winter Qtr, 3011, ★Sec 3, T, 6:20-8:50, Phys 210 (Limit 50)

Winter Qtr, 3012, ★Sec 1, W, 6:20-8:50, VinH 206

Winter Qtr, 3012, ★Sec 2, Th, 6:20-8:50, VinH 364

Spring Qtr, 3011, ★Sec 4, Th, 6:20-8:50, Phys 210 (Limit 50)

Spring Qtr, 3012, ★Sec 3, T, 6:20-8:50, VinH 213

Spring Qtr, 3012, ★Sec 4, W, 6:20-8:50, VinH 211

**Stat 3091 INTRODUCTION TO PROBABILITY AND STATISTICS.** 4 credits, \$5121, \$5131, tuition\*: Resident \$344; Non-resident \$997.60.

Elementary probability and probability distributions, sampling and elements of statistical inference. (Prereq differential and integral calculus. Limited to 50)

Fall Qtr, ★Sec 1, Th, 6:20-8:50, AkerH 225

Winter Qtr, ★Sec 2, Th, 6:20-8:50, AkerH 225

Spring Qtr, ★Sec 3, Th, 6:20-8:50, AkerH 225

**Stat 5021 STATISTICAL ANALYSIS.** 5 credits, \$3012, tuition\*: Resident \$430; Non-resident \$1247; Resident Graduate credit \$590; Non-resident Graduate credit \$1298; Resident Graduate School credit \$1077.50; Non-resident Graduate School credit \$2370.50.

Intensive version of 3011-3012, designed primarily for graduate students needing statistics as a research technique. (Prereq college algebra or #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 30)

Fall Qtr, ★Sec 1, MW, 6-8:15, ClaOff B25, StP Campus

**Stat 5301 DESIGNING EXPERIMENTS.** 5 credits, \$5163, tuition\*: Resident \$430; Non-resident \$1247; Resident Graduate credit \$590; Non-resident Graduate credit \$1298; Resident Graduate School credit \$1077.50; Non-resident Graduate School credit \$2370.50.

Control of variation, construction and analysis of complete and incomplete block, split plot, factorial,

and groups of similar experiments. Confounding, crossover, and optimum seeking designs. (Prereq 3012 or 5021 or 5133 or #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 30)

Spring Qtr, ★Sec 1, MW, 6-8:15, ClaOff B25, StP Campus

**Stat 5302 APPLIED REGRESSION ANALYSIS.** 5 credits, \$5161, tuition\*: Resident \$430; Non-resident \$1247; Resident Graduate credit \$590; Non-resident Graduate credit \$1298; Resident Graduate School credit \$1077.50; Non-resident Graduate School credit \$2370.50.

Simple, multiple, and polynomial regression. Estimation, testing, and prediction. Stepwise and other numerical methods; examination of residuals; weighted least squares; nonlinear models; response surface. Experimental research and economic applications. (Prereq 3012 or 5021 or 5133 or #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 30)

Winter Qtr, ★Sec 1, MW, 6-8:15, ClaOff B36, StP Campus

## Studio Arts

See Art

## Student Project for Amity Among Nations (SPAN)

SPAN offers an opportunity for undergraduate and graduate students to pursue their own research in another country and receive academic credit at the University of Minnesota. In the summer of 1996, SPAN students, under the guidance of experienced academic advisers, will travel to either Austria/Germany, Brazil, Croatia, or Tanzania. The three-phase SPAN program includes: (1) a year of pre-departure study of a foreign culture (including language when appropriate); (2) a summer abroad (eight weeks minimum) to gather information on an individual project; and (3) the completion of a research paper in the return year. Students are awarded 12 credits for the entire program. Participants are selected a year prior to their summer abroad and enter a nine-month cultural orientation program in the fall. For further information, contact SPAN, 107 Nicholson Hall, University of Minnesota, Minneapolis, MN 55455; (612) 626-1083. Language courses offered by SPAN are listed under Foreign Studies SPAN (FSSP) in this bulletin.

**For information about other study abroad opportunities, visit the Global Campus office at 106 Nicholson Hall, or telephone (612) 625-3379.**

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

### Study Skills

See Learning and Academic Skills

### Swedish

See Scandinavian Languages

### Textiles and Clothing

See Design, Housing, and Apparel, page 143.

### Theatre Arts (Th)

(208 Middlebrook Hall: 625-6699)

#### College of Liberal Arts

Textbooks for most Th courses are available at University of Minnesota Bookstore—West Bank (625-3000).

(See also English; and Compleat Scholar noncredit courses)

Shelila Bland, Lecturer  
Barbara Field, Lecturer  
Marisha Chamberlain, Lecturer  
James Norwood, Associate Professor

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Theatre Arts. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**Th 1101 INTRODUCTION TO THE THEATRE.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20. (IS)

History and theory of plays and playwrights. (No prereq. Limited to 60)

Fall Qtr, ★Sec 1, MW, 6-8, RarigC 610, Norwood  
Winter Qtr, ★Sec 2, MW, 6-8, BlegH 150, Norwood

**Th 1301 ACTING FOR NON-THEATRE MAJORS.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Explores the relationships between acting on the stage and acting in "real life." Emphasis on movement, voice, scene work, daily observations, and improvisations. An introduction to acting through an understanding of our minds, bodies, and naturalism. A class for would-be actors and actresses who might like to take the first step to acting in plays or improving their acting roles in everyday life. (Prereq 1101 or ¶1101. Limited to 30)

Spring Qtr, ★Sec 1, Sa, 9 a.m.-12, RarigC 90

**Th 1321 BEGINNING ACTING.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Beginning techniques and exercises leading to performance, monologues, and scenes. (Prereq 1101, 1504. Limited to 16)

Spring Qtr, ★Sec 1, Sa, 9 a.m.-12, RarigC 210, Norwood

(See also CSch 0231, "Play" Acting: Interactive Theatre Workshop)

**Th 1805 AMERICAN ETHNIC LITERATURE IN PERFORMANCE.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

Reading and analyzing of selected poems, stories, and dramas by Afro-American, American Indian, Asian American, and Chicano writers, and the sharing of insights into a multiracial and multiethnic society through solo and group performances. (No prereq. Limited to 20)

Fall Qtr, ★Sec 1, W, 6:20-8:50, RarigC 616

Winter Qtr, ★Sec 2, W, 6:20-8:50, RarigC 616

Spring Qtr, ★Sec 3, W, 6:20-8:50, RarigC 616

**Th 3115 INTRODUCTION TO PLAYWRITING.** 4 credits, §EngW 3110, tuition\*: Resident \$344; Non-resident \$997.60.

Introduction to forms of playwriting. (Prereq #. Sec 1 meets concurrently with EngW 3110. Limited to a combined total of 16)

Fall Qtr, ★Sec 1, T, 6:20-8:50, RarigC 616, Field

**Th 3803 PLATFORM PERFORMANCE.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Reading and analyzing selected poems, plays, and stories and interpreting literary insights through solo and group performance. (Prereq Management major. Limited to 20)

Winter Qtr, ★Sec 1, T, 6:20-8:50, RarigC 610

(See also CSch 0126, Improvisational Theatre Without the Jokes)

**Th 5115 ADVANCED PLAYWRITING I.** 4 credits, §EngW 5204, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40. (IS)

Advanced playwriting workshop for students with established competence. (Prereq written #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with EngW 5204. A joint Day/Extension class limited to a combined total of 6 Extension students)

Winter Qtr, ★Sec 1, W, 4:15-6:45, BlegH 205

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



**Th 5950 READING AS PLAYWRIGHTS: CONTEMPORARY DRAMA.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Directed readings in contemporary drama and special assignments for students interested in exploring their potential for playwriting for the theatre of today. **Must be taken A-F.** (Prereq written Δ. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with EngW 5310 sec 2. Limited to 7)

Fall Qtr, ★Sec 1, W, 4:15-6:45, LindH 203, Chamberlain

## Training and Development

See *Human Resource Development* in Vocational and Technical Education

## University College (UC)

See the Degrees and Certificates section of this Bulletin

## Urban Affairs

See Civil Engineering; The Compleat and Practical Scholar noncredit courses; Design; General College; Geography; Industrial Relations; Public Affairs; Public Health; Interdepartmental Study; and Sociology

## Urban Studies (UrbS)

(348 Social Sciences: 626-1626)

### College of Liberal Arts

Textbooks for most UrbS courses are available at University of Minnesota Bookstore—West Bank (625-3000).

Joe Austin, Teaching Assistant in Urban Studies

Judith Martin, Director

**Joint Day/Extension Classes**—You may register through Extension for all Urban Studies day school classes, some of which are scheduled after 4 p.m. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**UrbS 3104 INTRODUCTION TO URBAN STUDIES.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Introduction to the field for urban studies sophomores and those considering an urban studies major. Lectures and discussions to integrate the diverse aspects of urban studies. **Must be taken A-F.** (Prereq #. A joint Day/Extension class limited to 10 Extension students)

Spring Qtr, ★○Sec 1, T, 6-9, BlegH 120, Martin  
(See also CSch 0351, Downtown Versus Edge Cities)

**UrbS 3301 AMERICAN CITIES: SETTINGS FOR CULTURAL PLURALISM.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

An exploration of the potential that U.S. cities hold for nurturing cultural pluralism. Explores the problems, conflicts, and successes of pluralistic efforts in our cities. The focus will be on different groups of people within American urban settings and how they relate to one another and to the dominant culture. **Must be taken A-F.** *Fulfills CLA cultural pluralism requirement.* (No prereq. A joint Day/Extension class limited to 10 Extension students)

Spring Qtr, ★○Sec 1, W, 6-9, AndH 270, Austin

## Veterinary Medicine

(455 Veterinary Teaching Hospitals: 624-9227)

Textbooks for most CVM courses are available at University of Minnesota Bookstore—St. Paul (624-9200).

William M. Breene, Professor of Food Science and Technology

Francis F. Busta, Professor of Food Science and Nutrition

Robert A. Robinson, Professor

Ashok K. Singh, Associate Professor

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

### Clinical and Population Sciences (CAPS)

**CAPS 5280 WORLD FOOD PROBLEMS.** 3 credits, \$AgEc 5790, \$Agro 5200, \$FScN 5643, tuition\*: Resident \$450; Non-resident \$990; Resident Graduate credit \$450; Non-resident Graduate credit \$990; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

A multidisciplinary approach to social, economic, and technical problems of feeding the world's growing population. Principles sought from social and economic sciences and plant, animal, and food sciences for their application to world food problems. (Prereq DVM or grad student with #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with AgEc 5790, 5280, Agro 5200 and FScN 5643. A joint Day/Extension class)

Fall Qtr, ●Sec 1, W, 6-9, ClaOff B35, StP Campus, Breene, Busta, Robinson

### College of Veterinary Medicine (CVM)

**CVM 3100 PERSPECTIVES: INTERRELATIONSHIPS OF PEOPLE AND ANIMALS IN SOCIETY TODAY.** 2 or 3 credits, tuition\* each credit: Resident \$150; Non-resident \$330. (IS)

Interrelationships of people and animals from several viewpoints. The social, economic, and health consequences of these relationships including issues such as pets and people sharing an urban environment, animal rights, and the influence of differences in cultures on animal-human relationships. (No prereq. Meets concurrently with PubH 3301, 5301. A joint Day/Extension class)

Spring Qtr, ●Sec 1, T, 4-5:40, AnScVM 125, StP Campus, Robinson

(See also PSch 0929, Heads to Tails: A Practical Guide to Pet Care)

### Veterinary Diagnostic Medicine (VDM)

**VDM3001 BASIC ENVIRONMENTAL TOXICOLOGY.** 3 credits, tuition\*: Resident 450; Non-resident \$990.

Discussion of environmental chemistry, chemical pollution, and health hazards of environmental pollution. (Prereq Chem 1001, Biol 1005 or equivalent or #)

Fall Qtr, Sec 1, TTh, 6-8, VetDL, StP Campus, Singh

**VDM3002 ENVIRONMENTAL AND HUMAN ECOTOXICOLOGY.** 3 credits, tuition\*: Resident 450; Non-resident \$990.

Discussion of the ecosphere, human evolution, pollution and environment, effects of pollution on society, and future directions. (Prereq 3001)

Winter Qtr, Sec 1, TTh, 6-8, VetDL, StP Campus, Singh

**VDM3003 TOPICS IN TOXICOLOGY.** 3 credits, tuition\*: Resident 450; Non-resident \$990.

Presentation and discussion of current issues regarding environmental toxicology. (Prereq 3001, 3002)

Spring Qtr, Sec 1, TTh, 6-8, VetDL, StP Campus, Singh

### Vocabulary Building

See General College communication skills; and The Practical Scholar noncredit courses

### Vocational and Technical Education

(350 Vocational/Technical Building: 624-1221)

**College of Education and Human Development**  
(Vocational and Technical Education)

Textbooks for most AdEd, AgEd, BIE, FE, HRD, and VoEd courses are available at University of Minnesota Bookstore—St. Paul (624-9200).

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in several Vocational Education areas. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**For registration information about day school College of Education and Human Development courses, see page 160 or call 625-6501.**

Some off-campus courses are also available through the department's Office of Special Services. For information, telephone (612) 624-1700.

Contact Vocational and Technical Education to request additional information about course offerings for vocational licensure and degrees in the following programs:

- Adult Education
- Agricultural Education
- Business and Industry Education
- Family Education
- Human Resource Development
- Vocational Education

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

Michael Baizerman, Professor of Social Work  
 Ted Bowman, Lecturer  
 James M. Brown, Associate Professor  
 George Copa, Professor  
 Harlan G. Copeland, Associate Professor  
 Charles R. Hopkins, Professor  
 James C. Kielsmeier, Assistant Professor  
 Richard Krueger, Adjunct Professor and Extension Educator, Minnesota Extension Service  
 Judith Lambrecht, Professor  
 Gary Leske, Associate Professor and Director of Graduate Studies  
 Theodore Lewis, Associate Professor  
 James Maddock, Associate Professor, Family Social Science  
 Jerry McClelland, Associate Professor  
 Gary N. McLean, Professor  
 Neal Nickerson, Professor of Educational Policy and Administration  
 Rosemarie J. Park, Associate Professor  
 Roland Peterson, Professor  
 Shari Peterson, Assistant Professor  
 Jane Plihal, Associate Professor  
 David Pucel, Professor  
 Nancy J. Rohde, Assistant Professor  
 Marilyn Rossman, Associate Professor  
 Byron Schneider, Associate Professor of Social Work  
 R. Shumer, Lecturer and Project Director  
 Mary Ann Smith, Associate Professor  
 James Stone, III, Associate Professor  
 Richard Swanson, Professor  
 Ruth Thomas, Associate Professor  
 Joyce Walker, Extension Educator, 4-H Youth Dev. Center  
 Howard Y. Williams, Professor

### Adult Education (AdEd)

(325 Vocational and Technical Education: 624-1221)

**AdEd 5103 (formerly Educ 5103) ADULT EDUCATION WORKSHOP.** 1-12 cr (maximum 12 cr), 3 credits each offering, §Educ 5102, tuition each offering\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Study of topic appropriate to the activities and interests of the participant. **Must be taken A-F.**  
*Focus Sec 1:* Information Resources for Educators.  
*Focus Sec 2:* Family Literacy. (Prereq practicing

adult educator or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Fall Qtr, ★● Sec 1, Th, 4-6:30, VoTech 250, StP Campus, Park

Spring Qtr, ★● Sec 2, W, 4-6:30, VoTech R375, StP Campus, Rohde

**AdEd 5104 SURVEY: HUMAN RESOURCE DEVELOPMENT AND ADULT EDUCATION.** 4 credits, §HRD 5104, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

General concepts of human resource development and adult education; literature, objectives, history, philosophy, research, institutions, issues, and trends. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with HRD 5104. A joint Day/Extension class limited to 5 Extension students)

Fall Qtr, ★● Sec 1, W, 4-6:30, VoTech R285, StP Campus, Lewis, S Peterson

Winter Qtr, ★● Sec 2, M, 4-6:30, VoTech R280, StP Campus, S Peterson

Spring Qtr, ★● Sec 3, T, 4-6:30, VoTech 220, StP Campus, S Peterson

**AdEd 5201 (formerly Educ 5201) INTRODUCTION TO THE UNDEREDUCATED ADULT.** 3 credits, §Educ 5201, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Issues in literacy education, characteristics, problems, individual differences of the adult undereducated learner; traditional and innovative approaches for working with adults in literacy programs. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Fall Qtr, ★● Sec 1, T, 4-6:30, VoTech 220, StP Campus, Park

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

### **AdEd 5202 (formerly Educ 5202) ADULT LITERACY: DIAGNOSIS AND PRESCRIPTION.**

3 credits, §Educ 5202, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Application of diagnostic information, instruments, and techniques to learning difficulties of adults in reading and mathematics programs. **Must be taken A-F.** (Prereq 5201 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Winter Qtr, ★○Sec 1, W, 4-6:30, VoTech R385, StP Campus, Park

### **AdEd 5203 (formerly Educ 5203) ADULT LITERACY: METHODS AND MATERIALS.**

3 credits, §Educ 5203, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Teaching literacy skills to adults: basic theories, approaches, overview of methods and materials for implementation. **Must be taken A-F.** (Prereq 5202 or Elem 5331 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Spring Qtr, ★○Sec 1, M, 4-6:30, VoTech 220, StP Campus, Park

### **AdEd 5204 (formerly Educ 5204) READING IN WORK SETTINGS.**

3 credits, §VoEd 5204, Educ 5204, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Overview of concepts involved in integrating reading instruction into vocational training programs and work settings: diagnosis and methods of assessing needs of vocational students and workers on a job; techniques for building needs into training programs. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Winter Qtr, ★○Sec 1, M, 4-6:30, VoTech R285, StP Campus, Park

### **AdEd 5301 (formerly Educ 5301) DESIGNING THE ADULT EDUCATION PROGRAM.**

3 credits, §Educ 5301, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident

Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Designing and implementing educational programs for adults; concepts, theories, determining needs, educational objectives, learning experiences, and evaluating outcomes. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Fall Qtr, ★○Sec 1, W, 4-6:30, VoTech R385, StP Campus, Copeland

Spring Qtr, ★○Sec 2, M, 4-6:30, VoTech 240, StP Campus, Rohde

### **AdEd 5401 (formerly Educ 5401) ADULT LEARNING AND DEVELOPMENT THROUGH THE LIFE SPAN.**

3 credits, §Educ 5401, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Physiological, social, and cultural bases of adult behavior; motivation, socialization, personality change as applied to education of adults. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 32)

Fall Qtr, ★○Sec 1, T, 4-6:30, VoTech R380, StP Campus, Williams (A joint Day/Extension class limited to 12 Extension students)

Winter Spec Term, ★Sec 2, TTh, Jan. 2-Feb. 8, 4-6:30, ClaOff B36, StP Campus, Williams

Spring Qtr, ★○Sec 3, T, 4-6:30, VoTech R385, StP Campus, Leske (A joint Day/Extension class limited to 12 Extension students)

### **AdEd 5411 (formerly Educ 5411) STRATEGIES FOR TEACHING ADULTS.**

3 credits, §Educ 5411, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Identification, classification, and analysis of techniques used in teaching adults. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Fall Qtr, ★○Sec 1, M, 4-6:30, VoTech 240, StP Campus, S Peterson

Winter Qtr, ★○Sec 2, Th, 4-6:30, VoTech R285, StP Campus, S Peterson

Spring Qtr, ★○Sec 3, Th, 4-6:30, VoTech R385, StP Campus, Park

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**AdEd 5421 DISTANCE EDUCATION.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Survey of distance education covering the concept, theories, history, delivery systems, and present practice. Emphasis is on practice in the U.S., but topics and issues are explored from an international perspective. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Winter Qtr, ★●Sec 1, W, 4-6:30, VoTech R390, StP Campus, Rohde

**AdEd 5440 (formerly Educ 5440) MULTIDISCIPLINARY PERSPECTIVES ON AGING.** 4 credits, §Educ 5440, §CPsy 5305, §HSU 5009, §PA 5414, §Phar 5009, §PubH 5737, §SAHP 5009, §Soc 5960, §SW 5024, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

See course description for Soc 5960. **Must be taken A-F.** *Students who want graduate credit should register for one of the following: AdEd 5440, CPsy 5305, Nurs 5780, PA 5414, PubH 5737, SW 5024, or Soc 5960. Students who want undergraduate credit should register for Phar 5009 or HSU 5009.* (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with CPsy 5305, Soc 5960, HSU 5009, Phar 5009, PA 5414, PubH 5737, SW 5024. A joint Day/Extension class)

Fall Qtr, ★●Sec 1, MW, 4:40-6:25, MoosT 2-690, Williams (Limited to a combined total of 37 Extension students)

Spring Qtr, ●Sec 2, MW, 4:40-6:25, MoosT 2-690

**AdEd 5450 CRITICAL PEDAGOGY.** 3 credits, §FE 5450, §VoEd 5450, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Examination of the meaning of critical pedagogy; critique of educational practice in formal and non-formal settings. **Must be taken S-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with FE 5001, 5450, VoEd 5450. A joint Day/Extension class limited to 5 Extension students)

Spring Qtr, ★●Sec 1, Th, 4-6:30, VoTech R380, StP Campus, McClelland

**AdEd 5501 (formerly Educ 5501) CONTINUING EDUCATION AND THE PROFESSIONS.** 3 credits, §Educ 5501, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Review of literature; analysis of philosophies, issues, and trends; emphasis on integrating personal growth, professional needs, and statutory requirements in continuing education programs. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 12 Extension students)

Winter Qtr, ★●Sec 1, M, 4-6:30, VoTech R250, StP Campus, Rohde

### Agricultural Education (AgEd)

(320 Vocational/Technical Building: 624-2221)

**AgEd 5026 EXTENSION ADMINISTRATION.** 3 credits, §VoEd 5500, §VoEd 5600, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Administration of the Extension Service organization at the county, area, and state levels. **Must be taken A-F.** (Prereq #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, ●Sec 1, M, 4-6:30, VoTech R385, StP Campus

### Business and Industry Education (BIE)

(425 Vocational/Technical Building: 624-3004)

**BIE 5002 (formerly BME 5252) TEACHING PROMOTION DISPLAY.** 3 credits, §BDE 5252, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Identifying materials and methods for teaching visual merchandising, sales promotion, advertising, public relations, and promotion planning. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25)

Spring Qtr, ★Sec 1, Th, 3:30-6, VoTech R285, StP Campus

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**BIE 5010 (formerly BME 5310) INTRODUCTION TO MICROCOMPUTER APPLICATIONS IN BUSINESS AND INDUSTRY EDUCATION.** 3 credits, §BDE 5310, BME 3310, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Instructional uses of microcomputers, representative business and marketing education applications, including word processing, databases, spreadsheets, and graphics. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Fall Qtr, ★●Sec 1, W, 3:30-6, ClaOff 17, StP Campus

**BIE 5015 (formerly BME 5160) ADVANCED WORD PROCESSING PRACTICUM.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Completion of projects using advanced editing and printing capabilities. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Fall Qtr, ★●Sec 1, M, 3:30-6, ClaOff 17, StP Campus

**BIE 5020 (formerly BME 5330) SPREADSHEET ANALYSIS USING MICROCOMPUTERS IN BUSINESS AND INDUSTRY EDUCATION.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Introduction to use of spreadsheet software, instructional applications in business areas. **Must be taken A-F.** (Prereq BIE 5010 or equivalent. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Winter Qtr, ★●Sec 1, W, 3:30-6, ClaOff 17, StP Campus

**BIE 5025 (formerly BME 5335) TEACHING MICROCOMPUTER GRAPHICS IN BUSINESS AND INDUSTRY.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Representative microcomputer-based business graphics software packages; use for making instructional presentations; use of simulated projects to teach applications in business and industry classrooms. **Must be taken A-F.** (Prereq 5010 or equivalent. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Winter Qtr, ★●Sec 1, T, 3:30-6, ClaOff 135, StP Campus

**BIE 5030 DATA BASE MICROCOMPUTER APPLICATIONS.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Introduction to use of data base software; instructional applications in business areas. **Must be taken A-F.** (Prereq BME 3310 or equivalent. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Spring Qtr, ★●Sec 1, M, 3:30-6, ClaOff 17, StP Campus

**BIE 5040 (formerly BME 5365) INTEGRATED MICROCOMPUTER APPLICATIONS IN BUSINESS AND INDUSTRY EDUCATION.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Advanced business and industry computer applications integrating business word processing, spreadsheets, business graphics, and data base software. **Must be taken A-F.** (Prereq 5010, 5015, 5020, 5025, 5030 or equivalent. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Spring Qtr, ★●Sec 1, Th, 3:30-6:30, ClaOff 17, StP Campus, Lambrecht

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**BIE 5253 (formerly BME 5253) SUPERVISORY TRAINING.** 3 credits, §HRD 5253, §BDE 5253, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Problems, practices, programs, issues, and methodologies related to preparing trainers of supervisors in business, office, and marketing occupations. **Must be taken A-F.** (Prereq VoEd 5340. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with HRD 5253. A joint Day/Extension class limited to 5 Extension students)

Spring Qtr, ★●Sec 1, T, 4-6:30, VoTech 240, StP Campus

**BIE 5261 (formerly BME 5261) SALES TRAINING.** 3 credits, §HRD 5261, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Introduction to strategies and techniques useful in developing effective sales people. **Must be taken A-F.** (Prereq 3060. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with HRD 5261. A joint Day/Extension class limited to 5 Extension students)

Fall Qtr, ★●Sec 1, Th, 4-6:30, VoTech 135, StP Campus

**BIE 5262 (formerly BME 5262) CUSTOMER SERVICE TRAINING.** 3 credits, §HRD 5262, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Overview of customer service strategies used by successful organizations and training practices used to develop customer-oriented personnel. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with HRD 5262. A joint Day/Extension class limited to 5 Extension students)

Spring Qtr, ★●Sec 1, W, 4-6:30, VoTech 240, StP Campus, S Peterson

**BIE 5300 (formerly Ind 5300) ORGANIZATIONAL NEEDS ASSESSMENT.** 3 credits, §HRD 5300, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Identification of organizational performance problems, problem causes, and recommendations of training solutions and other interventions to improve performance in business, industry, and schools. **Must be taken A-F.** (Prereq 5330, HRD 5750, or CISY 5201. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with HRD 5300. A joint Day/Extension class limited to 5 Extension students)

Winter Qtr, ★●Sec 1, Th, 4-6:30, VoTech R275, StP Campus

**BIE 5301 (formerly Ind 5301) STUDENT TRAINEE EVALUATION SYSTEMS.** 3 credits, §HRD 5301, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Test development, performance and learning evaluation, affective evaluation, learning progress reporting systems. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with HRD 5301. A joint Day/Extension class)

Winter Qtr, ●Sec 1, M, 4-6:30, VoTech 240, StP Campus, Pucel

**BIE 5303 (formerly Ind 5303) INSTRUCTIONAL AIDS.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Planning, construction, use. **Must be taken A-F.** (Prereq education or grad student. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr, ●Sec 1, W, 4-6:30, VoTech 220, StP Campus

**BIE 5325 (formerly Ind 5325) FOUNDATIONS OF INDUSTRIAL EDUCATION.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

History, objectives, development, and current practices of the field. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Fall Qtr, ★●Sec 1, Th, 4-6:30, VoTech R280, StP Campus, Lewis

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**BIE 5365 (formerly Ind 5516) CURRICULUM DEVELOPMENT IN TECHNICAL EDUCATION.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

The nature of technical knowledge. Differing conceptions of technology. The structure of thinking in science and technology. Alternative ways of conceptualizing, developing, delivering, and managing technology curricula. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)  
Spring Qtr, ★○Sec 1, M, 4-7:20, VoTech R280, StP Campus, Lewis

**BIE 5366 MANAGEMENT TRAINING AND DEVELOPMENT PRACTICES.** 4 credits, \$HRD 5366, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Problems, practices, programs, and methodologies relating to the training and development of managers, including needed competencies, needs assessment, delivery modes, and evaluation; includes on-site visits and critiques. **May be taken S-N.** (Prereq a principles of management or supervision course or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)  
Spring Qtr, ★○Sec 1, M, 6:45-10:05, VoTech R380, StP Campus

**BIE 5400 (formerly BME 5300) INTRODUCTION TO BUSINESS AND MARKETING EDUCATION CURRICULUM.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Introduction to the conceptual models of marketing and business education useful in the design and delivery of programs in secondary and postsecondary schools, in adult education settings, and in business and industry. **May be taken S-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)  
Fall Qtr, ★○Sec 1, W, 3:30-6:30, VoTech R280, StP Campus, Lambrecht

**BIE 5451 (formerly BME 5151) RESEARCH AND METHODS IN TEACHING TYPEWRITING/KEYBOARDING.** 3 credits, §BME 3300, §BDE 5151, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Application of research findings to classroom methodology and materials development. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Winter Qtr, ★○Sec 1, Th, 4-6:30, VoTech 230, StP Campus, McLean

**BIE 5452 (formerly BME 5152) RESEARCH AND METHODS IN TEACHING THE BASIC BUSINESS SUBJECTS.** 3 credits, §BME 3302, §BDE 5152, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Application of research findings to classroom methodology in general business, economics, introduction to business, business law, and consumer education. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Fall Qtr, ★○Sec 1, Th, 3:30-6:30, VoTech 240, StP Campus

**BIE 5457 (formerly BME 5157) MATERIALS AND METHODS IN OFFICE EDUCATION.** 3 credits, §BDE 5157, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Recent research and developments in teaching office procedures, the preparatory and related classes for cooperative office education, and the advising of vocational office education student organizations. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Winter Qtr, ★○Sec 1, M, 3:30-6:30, VoTech 230, StP Campus, Lambrecht

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



**BIE 5605 (formerly Ind 5305) CRITICAL ISSUES.** 3 credits, §BME 5340, §BDE 5155, §BDE 5250, §Ind 5305, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Identification, analysis, and discussion of current problems in the field. **Must be taken A-F.** (Prereq Educ major or grad student. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Winter Qtr, ★○Sec 1, T, 4-6:30, VoTech 135, StP Campus, Hopkins

**BIE 5630 (formerly Ind 5330) COURSE DEVELOPMENT.** 3 credits, §BME 5353, §BDE 5353, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Content identification, stating objectives, sequencing, lesson planning and selection of methods and media for instruction. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Fall Qtr, ★○Sec 1, T, 4-6:30, VoTech R280, StP Campus, Pucel

**BIE 5660 (formerly Ind 5360) INSTRUCTIONAL METHODS.** 3 credits, §BME 5305, §HRD 5660, §Ind 5360, §BDE 3305, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Implementation of instructional strategies and methods. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with HRD 5660. A joint Day/Extension class limited to 5 Extension students)

Winter Qtr, ★○Sec 1, Th, 4-6:30, VoTech R250, StP Campus, Lewis

**BIE 5752 TECHNICAL SKILLS TRAINING.** 4 credits, §HRD 5752, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Analysis of technical skills training practices in business and industry. Systems and process analysis and troubleshooting of work behavior will be emphasized along with the methods of design and development of training materials. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with HRD 5752. A joint Day/Extension class limited to a 5 Extension students)

Winter Qtr, ★○Sec 1, T, 6:45-10:05, VoTech R250, StP Campus, Lewis

### Family Education (FE)

(325 Vocational/Technical Building: 624-3010)

**FE 5002 THINKING, LEARNING, AND TEACHING IN WORK, FAMILY, AND COMMUNITY.** 3 credits, §HEEd 5002, §VoEd 5002, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Nature of thinking, learning, and teaching in everyday life contexts of work, family, and community. Theory and practice relevant to stimulating and supporting thinking and learning within and for contexts. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with VoEd 5002. A joint Day/Extension class limited to 10 Extension students)

Winter Qtr, ★○Sec 1, Th, 4-6:30, VoTech R380, StP Campus, Thomas

**FE 5300 FAMILY EDUCATION CURRICULUM.** 3 credits, §HHEd 5300, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Examination of research and theory; development of programs for all ages and evaluation of materials. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension students)

Fall Qtr, ★○Sec 1, M, 4-6:30, VoTech R380, StP Campus, Thomas

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**FE 5310 METHODS IN TEACHING FAMILY EDUCATION.** 3 credits, §HHEd 5310, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Theory and relevant research; application to educational objectives, strategies, student needs, and program evaluation. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension students)

Winter Qtr, ★●Sec 1, W, 4-6:30, VoTech R285, StP Campus, McClelland

**FE 5315 EVALUATION IN FAMILY EDUCATION.** 3 credits, §HHEd 5315, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Collecting and interpreting evidence related to individual and program performance. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension students)

Spring Qtr, ★●Sec 1, Th, 4-6:30, VoTech 240 StP Campus

**FE 5320 ADULT EDUCATION IN FAMILY EDUCATION.** 3 credits, §HEEd 5320, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Planning a community program; teaching procedures; special problems. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension students)

Fall Qtr, ★●Sec 1, W, 4-6:30, VoTech R380, StP Campus, Plihal

**FE 5404 INTRODUCTION TO EARLY CHILDHOOD FAMILY EDUCATION PROGRAMS.** 1 credit, §HEEd 5404, tuition\*: Resident \$93.50; Non-resident \$271.15; Resident Graduate credit \$118; Non-resident Graduate credit \$259.60; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

History, philosophy, and implementation of programs. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 15 Extension students)

Winter Spec Term, ★●Sec 1, Sa, 8 a.m.-5, Jan. 20, VoTech R380, StP Campus, Cooke. *No late fee through Jan. 12.*

**FE 5405 CHILD DEVELOPMENT AND PARENT EDUCATION.** 4 credits, §HEEd 5405, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Objectives, content, curriculum organization, teaching methods, materials, and evaluation approaches for teaching youth and adults about social, cultural, psychological, economic, and technical aspects of child development, parenting, and parent-child interaction. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr, ●Sec 1, T, 4-7:20, VoTech R380, StP Campus, McClelland

**FE 5406 SPECIAL TOPICS IN PARENT AND FAMILY EDUCATION: ADVANCED GROUP METHODS FOR PARENT AND FAMILY LIFE EDUCATION.** 2 credits, tuition\*: Resident \$187; Non-resident \$542.30; Resident Graduate credit \$236; Non-resident Graduate credit \$519.20; Resident Graduate School credit \$431; Non-resident Graduate School credit \$948.20.

Study of issues and current literature focused on emerging topics relevant to parent and family education. *This offering:* Lab approach for experienced group leader in addressing difficult group situations. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25)

Spring Qtr, ★Sec 2, Th, 4-5:45, VoTech R275, StP Campus, Bowman

**FE 5407 FAMILY LIFE EDUCATION.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Objectives, content, curriculum development, methods, materials, and evaluation approaches for teaching diverse groups of youth and adults family life concepts including current research in communication, relationships, sexuality, self-esteem, and decision making. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension students)

Spring Qtr, ★●Sec 1, T, 4-6:30, VoTech R380, StP Campus, Rossmann

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**FE 5408 WORK-FAMILY RELATIONSHIPS.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Examination of interactions between work and family with focus on educational applications for youth and adults. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension students)

Fall Qtr, ★●Sec 1, Th, 4-6:30, VoTech 220, StP Campus, Rossmann

**FE 5409 GROUP METHODS FOR PARENT AND FAMILY EDUCATION.** 2 credits, §HEED 5409, tuition\*: Resident \$187; Non-resident \$542.30; Resident Graduate credit \$236; Non-resident Graduate credit \$519.20; Resident Graduate School credit \$431; Non-resident Graduate School credit \$948.20.

Methods and theories applied to development of skills for leading parent and family education groups. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension students)

Winter Qtr, ★●Sec 1, Th, 4-5:45, VoTech 240, StP Campus, Rossmann

**FE 5411 CHALLENGES IN SEXUALITY EDUCATION.** 4 credits, §FSoS 5240, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Within an ecological framework, this course prepares educators in a variety of settings to develop, deliver, and evaluate sexuality education. The focus is on strategies to assist children and adults to acquire information, form positive values, develop interpersonal skills, and exercise personal responsibility in the sexual dimension of individual and family life. **Must be taken A-F.** (Prereq 5407, FSoS 5001 or #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with FSoS 5240. A joint Day/Extension class limited to a combined total of 10 Extension students)

Spring Qtr, ★●Sec 1, M, 4-7, McNH 376, StP Campus, Maddock, Rossmann

**FE 5416 SPECIAL TOPICS: ADVANCED GROUP METHOD FOR PARENT AND FAMILY EDUCATION.** 3 credits, §HEED 5416, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Evolving perspectives of parent education; emphasis on psychodynamic, conceptual change approaches; reflective and dialogic approaches for working with parents in understanding beliefs and examining their origins and consequences; examination of issues related to diversity and to self awareness and ethics of professionals. **Must be taken A-F.** (Prereq 5405. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class 10 Extension students)

Spring Qtr, ★●Sec 1, W, 4-6:30, VoTech 380, StP Campus, Thomas

**FE 5450 SPECIAL TOPICS: CRITICAL PEDAGOGY.** 3 credits, §AdEd 5450, §FE 5001, §VoEd 5450, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Examination of critical pedagogy in school and adult education; application to education for family, work, community, and other topics of interest. **Must be taken S-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with AdEd 5450, FE 5001, VoEd 5450. A joint Day/Extension class limited to 5 Extension students)

Spring Qtr, ★●Sec 1, Th, 4-6:30, VoTech R380, StP Campus, McClelland

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

### Human Resource Development (HRD)

A focus is available in human resource development (HRD). The human resource development focus prepares professionals to serve in a variety of education, training, and organization development settings in industry and business. These settings include several types of training (skills and technical, management, sales, international, quality, and motivational) and six specific human resource job roles (instructor, media producer, designer, organization developer, manager, and researcher). For a brochure about the program, contact the Student Information Office, Vocational Education, R350 VoTech Building, University of Minnesota, 1954 Buford Ave., St. Paul, MN 55108; telephone (612) 624-1221; for questions about the program, contact Dr. Gary McLean, Program Coordinator, 420 Vocational and Technical Education Building, University of Minnesota, 1954 Buford Ave., St. Paul, MN 55108 (telephone 624-4901 or 624-3004).

#### **HRD 5104 SURVEY: HUMAN RESOURCE DEVELOPMENT AND ADULT EDUCATION.**

4 credits, §AdEd 5104, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

General concepts of human resource development and adult education; literature, objectives, history, philosophy, research, institutions, issues, and trends. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with AdEd 5104. A joint Day/Extension class limited to 5 Extension students)

Fall Qtr, ★●Sec 1, W, 4-6:30, VoTech R285, StP Campus, Lewis, S Peterson

Winter Qtr, ★●Sec 2, M, 4-6:30, VoTech R280, StP Campus, S Peterson

Spring Qtr, ★●Sec 3, T, 4-6:30, VoTech 220, StP Campus, S Peterson

**HRD 5253 SUPERVISORY TRAINING.** 3 credits, §BIE 5253, §BDE 5253, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Problems, practices, programs, issues, and methodologies related to preparing trainers of supervisors in business, office, and marketing occupations. **Must be taken A-F.** (Prereq VoEd 5340. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with BIE

5253. A joint Day/Extension class limited to 5 Extension students)

Spring Qtr, ★●Sec 1, T, 4-6:30, VoTech 240, StP Campus

**HRD 5261 (formerly BME 5261) SALES TRAINING.** 3 credits, §BIE 5261, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Introduction to strategies and techniques useful in developing effective sales people. **Must be taken A-F.** (Prereq 3060. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with BIE 5261. A joint Day/Extension class limited to 5 Extension students)

Fall Qtr, ★●Sec 1, Th, 4-6:30, VoTech 135, StP Campus

**HRD 5262 (formerly BME 5262) CUSTOMER SERVICE TRAINING.** 3 credits, §BIE 5262, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Overview of customer service strategies used by successful organizations and training practices used to develop customer-oriented personnel. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with BIE 5262. A joint Day/Extension class limited to 5 Extension students)

Spring Qtr, ★●Sec 1, W, 4-6:30, VoTech 240, StP Campus, S Peterson

**HRD 5300 (formerly Ind 5300) ORGANIZATIONAL NEEDS ASSESSMENT.** 3 credits, §BIE 5300, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Identification of organizational performance problems, problem causes, and recommendations of training solutions and other interventions to improve performance in business, industry, and schools. **Must be taken A-F.** (Prereq 5330, HRD 5750, or CISy 5201. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with BIE 5300. A joint Day/Extension class limited to 5 Extension students)

Winter Qtr, ★●Sec 1, Th, 4-6:30, VoTech R275, StP Campus

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**HRD 5301 (formerly Ind 5301) STUDENT TRAINEE EVALUATION SYSTEMS.** 3 credits, §BIE 5301, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Test development, performance and learning evaluation, affective evaluation, learning progress reporting systems. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with BIE 5301. A joint Day/Extension class limited to 5 Extension students)

Winter Qtr, ★○Sec 1, M, 4-6:30, VoTech 240, StP Campus, Pucel

**HRD 5366 MANAGEMENT TRAINING AND DEVELOPMENT PRACTICES.** 4 credits, §BIE 5366, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Problems, practices, programs, and methodologies relating to the training and development of managers, including needed competencies, needs assessment, delivery modes, and evaluation; includes on-site visits and critiques. **May be taken S-N.** (Prereq a principles of management or supervision course or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Spring Qtr, ★○Sec 1, M, 6:45-10:05, VoTech R380, StP Campus

**HRD 5660 (formerly Ind 5360) INSTRUCTIONAL METHODS.** 3 credits, §BME 5305, §BIE 5660, §Ind 5360, §BDE 3305, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Implementation of instructional strategies and methods. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with BIE 5660. A joint Day/Extension class limited to 5 Extension students)

Winter Qtr, ★○Sec 1, Th, 4-6:30, VoTech R250, StP Campus, Lewis

**HRD 5750 (formerly VoEd 5750) TRAINING IN INDUSTRY AND BUSINESS.** 3 or 4 credits; 4 credits this offering. Tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident

Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Appraisal of training function in industry and business; advancement of competencies in analysis, design, development, delivery, and evaluation of training. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25)

Fall Qtr, ★Sec 1, M, 6:45-10:05, VoTech R385, StP Campus

Winter Qtr, ★Sec 2, W, 6:45-10:05, VoTech R285, StP Campus

Spring Qtr, ★○Sec 3, T, 6:45-10:05, VoTech R285, StP Campus (A joint Day/Extension class limited to 5 Extension students)

**HRD 5752 TECHNICAL SKILLS TRAINING.** 4 credits, §BIE 5752, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Analysis of technical skills training practices in business and industry. Systems and process analysis and troubleshooting of work behavior will be emphasized along with the methods of design and development of training materials. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with BIE 5752. A joint Day/Extension class limited to 5 Extension students)

Winter Qtr, ★○Sec 1, T, 6:45-10:05, VoTech R250, StP Campus, Lewis

**HRD 5760 (formerly VoEd 5760) ORGANIZATION DEVELOPMENT IN INDUSTRY AND BUSINESS.** 3 or 4 credits; 4 credits this offering. Tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Introduction to major concepts, skills, and techniques. Topics covered include: definition; need; history; diagnosing organizations; intervention theories, techniques, and strategies (individual, team, intergroup, and total organization); change strategies; consulting; and issues. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25)

Fall Qtr, ★Sec 1, T, 6:45-10:05, VoTech R250, StP Campus

Winter Qtr, ★Sec 2, Th, 6:45-10:05, VoTech R285, StP Campus

Spring Qtr, ★Sec 3, W, 6:45-10:05, VoTech R280, StP Campus

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**HRD 5761 (formerly VoEd 5761) TEAMBUILDING IN BUSINESS AND INDUSTRY.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Introduction to the theory and techniques of building effective work teams. Skills development in facilitating team-building activities. **May be taken S-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Fall Spec Term, ★●Sec 1, Sa, Oct. 7, 14, 21, 28, Nov. 4, 11, 8 a.m.-1, VoTech R285, StP Campus

Winter Qtr, ★●Sec 2, M, 6:45-9:15, VoTech R285, StP Campus

**HRD 5762 (formerly VoEd 5762) MANAGEMENT OF CONFLICT.** 3 credits, §VoEd 5762, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Types and sources of conflict; diagnosis of conflict styles; skills and strategies for managing interpersonal, intergroup, and intragroup conflict. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Fall Qtr, ★●Sec 1, W, 6:45-9:15, VoTech R380, StP Campus

**HRD 5770 HUMAN RESOURCE DEVELOPMENT: ORGANIZATIONAL LEADERSHIP.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

History, theory, qualities and leadership styles as they relate to effective Human Resource Development initiatives. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Fall Qtr, ★●Sec 1, M, 6:45-10:05, VoTech R280, StP Campus

**HRD 5770 HUMAN RESOURCE DEVELOPMENT: SYSTEMS THINKING.** 1 credit, tuition\*: Resident \$93.50; Non-resident \$271.15; Resident Graduate credit \$118; Non-resident Graduate credit \$259.60; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Basic concepts of system theory at conceptual level and through a series of examples and experiential exercises; application of basic laws of systems theory to human organizations; issues in organizational change, organizational structure, and total quality management. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25)

Fall Spec Term, ★Sec 2, Sa, 8 a.m.-5, Sept. 30, VoTech R280, StP Campus

**HRD 5770 HUMAN RESOURCE DEVELOPMENT: FACILITATION AND MEETING SKILLS.** 1 credit, tuition\*: Resident \$93.50; Non-resident \$271.15; Resident Graduate credit \$118; Non-resident Graduate credit \$259.60; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Introduction to the disciplines of planning and running effective meetings. Tools and methods for meeting management and evaluation will be presented. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25)

Winter Spec Term, ★Sec 3, Sa, 8 a.m.-5, Jan. 20, VoTech R280, StP Campus

**HRD 5770 HUMAN RESOURCE DEVELOPMENT: EVALUATION IN HUMAN RESOURCE DEVELOPMENT.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Performance, learning, and satisfaction evaluation practices in human resource development including the underlying economic, systemic, and psychological theories that influence work place evaluation. **May be taken S-N.** (Prereq a course in curriculum design and 5750 or VoEd 5750 or 5760 or VoEd 5760, or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Spring Qtr, ★●Sec 4, M, 4-6:30, VoTech R250, StP Campus, Pucel

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**HRD 5770 HUMAN RESOURCE DEVELOPMENT: PLANNING AND DECISION-MAKING SKILLS.** 1 credit, tuition\*: Resident \$93.50; Non-resident \$271.15; Resident Graduate credit \$118; Non-resident Graduate credit \$259.60; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Introduction to disciplines of planning and decision making that are used in quality improvement efforts such as TQM or CQT. Tools and methods for facilitating group decisions and problem solving will be presented. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25)

Spring Spec Term, ★Sec 5, Sa, 8 a.m.-5, Mar. 30, VoTech R280, StP Campus

**HRD 5780 (formerly VoEd 5780) INTERNSHIP: HUMAN RESOURCE DEVELOPMENT.** Credits arr (maximum 15 cr), tuition\* each credit: Resident \$93.50; Non-resident \$271.15; Resident Graduate credit \$118; Non-resident Graduate credit \$259.60; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Students apply and contract for training and development positions in industry and business; individual contracts describe specific training and development responsibilities to be fulfilled during internship. **May be taken S-N.** (Prereq 5750 or VoEd 5750. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, ○Sec 1, Arr, Swanson

Winter Qtr, ○Sec 2, Arr, Swanson

Spring Qtr, ○Sec 3, Arr, McLean

**HRD 5781 INTERNATIONAL FIELD STUDY IN HUMAN RESOURCE DEVELOPMENT.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

An international field study of the training, organization development, career development, and quality improvement theories and practices found in a selected nation. Students will travel as a group for on-site experiences. Destination: South Africa. The trip will take place during spring break. *Students will be responsible for travel costs and expenses in addition to tuition. Contact the instructor before Dec. 31, 1995, if you plan to enroll.* **May be taken S-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25)

Winter Spec Term, ★Sec 1, Sa, 9 a.m.-4, Feb. 3, 10, Apr. 13 (3 meetings plus trip), VoTech 425R, StP Campus, Swanson. *No late fee through Jan. 26*

**HRD 5790 (formerly VoEd 5790) STRATEGIC PLANNING: HUMAN RESOURCE DEVELOPMENT.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Human capital as a component of industry and business strategic planning; analysis and articulation of practices. **Must be taken A-F.** (Prereq VoEd 5750 or VoEd 5760. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Winter Qtr, ★○Sec 1, Th, 6:45-10:05, VoTech 240, StP Campus

Spring Qtr, ★○Sec 2, Th, 6:45-10:05, VoTech R280, StP Campus

**HRD 5792 MANAGING HUMAN RESOURCE DEVELOPMENT.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Managing and leading human resource development activities in industry, business, and government to meet organizational objectives. Emphases are on mission, staffing, resources, systems, process management, and reporting. **May be taken S-N.** (Prereq 5750 or VoEd 5750 or 5760 or VoEd 5760, or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Spring Qtr, ★○Sec 1, W, 4-6:30, VoTech R250, StP Campus

**HRD 5793 INTERNATIONAL HUMAN RESOURCE DEVELOPMENT.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Problems, practices, programs, theories, and methodologies in human resource development as practiced internationally and in cross-cultural settings. **May be taken S-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Fall Qtr, ★○Sec 1, Th, 6:45-10:05, VoTech R285, StP Campus, McLean

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**HRD 5794 (formerly VoEd 5794) CONSULTING IN HUMAN RESOURCE DEVELOPMENT.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Analysis of five elements of the consulting profession in business and industry: marketing, subject matter expertise, organization development, business principles and communication skills; synthesis of the interdependent relationship of the five elements in the consultation process. **May be taken S-N.** (Prereq HRD or VoEd 5750, or HRD or VoEd 5760, or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Spring Spec Term, ★○Sec 1, Sa, 8 a.m.-1, Apr. 6, 13, 20, 27, May 4, 11, VoTech R280, StP Campus

**HRD 5795 HRD APPROACH TO QUALITY IMPROVEMENT.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Quality management and productivity improvement concepts from a training and organization development perspective. Specific processes and strategies to implement Juran's, Deming's, and Crosby's concepts will be developed. This is not a statistical process control course. **May be taken S-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Winter Qtr, ★○Sec 1, T, 6:45-10:05, VoTech R285, StP Campus

**HRD 5798 CURRENT ISSUES IN HUMAN RESOURCE DEVELOPMENT.** 4 credits, tuition\*: Resident \$374; Non-resident \$1084.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Issues currently confronting practitioners in training and organization development, with examination of conflicting viewpoints and resolution options. **May be taken S-N.** (Prereq HRD or VoEd 5750, 5760, or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Fall Qtr, ★○Sec 1, M, 6:45-10:05, VoTech R270, StP Campus

**HRD 5808 DIVERSITY IN EDUCATION AND WORK SETTINGS.** 3 credits, \$VoEd 5808, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

A forum of exploring collaborative diversity-related issues simultaneously among educators and Human Resource Development personnel. The nature of diverse populations, their unique learning/training needs, and effective diversity-related practices in education and work settings. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with VoEd 5808. A joint Day/Extension class limited to 5 Extension students) Winter Qtr, ★○Sec 1, W, 6:45-9:15, VoTech R385, StP Campus, Brown

**Vocational Education (VoEd)**  
(R350 Vocational/Technical Building: 624-1221)

**VoEd 5002 THINKING, LEARNING, AND TEACHING IN WORK, FAMILY, AND COMMUNITY.** 3 credits, \$FE 5002, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Nature of thinking, learning, and teaching in everyday life contexts of work, family, and community. Theory and practice relevant to stimulating and for supporting thinking and learning within and for contexts. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with FE 5002. A joint Day/Extension class limited to 5 Extension students)

Winter Qtr, ★○Sec 1, Th, 4-6:30, VoTech R380, StP Campus, Thomas

**VoEd 5010 TECHNOLOGY AND RESPONSIBLE CITIZENSHIP.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Study of the nature of technology. Examination of values and ethical issues relating to technology. Exploration of ways in which citizens can influence technological decisions in their communities. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Spring Qtr, ★○Sec 1, W, 4-6:30, VoTech 135, StP Campus, Lewis

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



**VoEd 5100 SPECIAL TOPICS IN INSTRUCTION: SERVICE-LEARNING.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Experientially based course for educators interested in integrating service-learning into the school curriculum, co-curricular activities, or youth agencies. Course covers rationale, philosophy, and purposes of service-learning in schools and youth-serving agencies; design, development, and implementation of curriculums and programs in which young people serve their communities; and exploration of learner outcomes and evaluation/assessment of projects. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Winter Qtr, ★●Sec 1, Th, 4-6:30, VoTech R280, StP Campus, Kielsmeier, Leske

**VoEd 5286 MARKETING OF EDUCATION AND TRAINING PROGRAMS.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Application of comprehensive marketing model to design and delivery of education and training programs for institutions, programs, and specific course offerings. Market research, market segmentation, product positioning, alternative marketing mix strategies, and marketing planning. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Fall Qtr, ★●Sec 1, T, 4-6:30, VoTech R250, StP Campus

**VoEd 5300 PHILOSOPHY AND PRACTICE OF VOCATIONAL EDUCATION.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Interpretation of the purposes of vocational education in varying socioeconomic contexts; analysis of vocational fields in regard to recipients, practices, legislation, and funding. **Must be taken A-F.** (No prereq. Qualified students may register for graduate

credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Fall Qtr, ★●Sec 1, M, 4-6:30, VoTech R285, StP Campus, Peterson

Spring Qtr, ★●Sec 2, M, 6:45-9:15, VoTech R385, StP Campus

**VoEd 5330 COORDINATION TECHNIQUES IN COOPERATIVE EDUCATION.** 3 credits, §BME 5352, §HEEd 5106, §Ind 5310, §AgEd 5071, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Responsibilities of instructor-coordinator; guidance, selection, placement, supervision, and evaluation of students; articulation of related instruction; training sponsor identification, orientation, development, and evaluation; purposes and management of the program. **Must be taken A-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Winter Qtr, ★●Sec 1, T, 4-6:30, VoTech R285, StP Campus, Leske

**VoEd 5340 PRINCIPLES OF SUPERVISORY MANAGEMENT.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Introduction to principles of personnel supervision for persons in vocational education, business, industry, or service organizations. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Winter Qtr, ★●Sec 1, W, 4-6:30, VoTech R280, Stone

**VoEd 5400 EDUCATION FOR WORK.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Examination of contextual bases underlying education for work; implications for practice. **Must be taken A-F.** (Prereq 5300 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Spring Qtr, ★●Sec 1, T, 4-6:30, VoTech R250, StP Campus, Copa

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**VoEd 5410 EXPERIENTIAL LEARNING: THEORY AND PRACTICE.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Principles and practice of experiential learning; analysis of students' own learning process; exploration of how experience is used in educational settings. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Winter Spec Term, Sec 1, M, 6:30-9:30, Jan.

8, VoTech R380, StP Campus; off-campus sites and weekend classes arr at first class meeting; Shumer

**VoEd 5420 YOUTH IN THE WORLD.** 3 credits, §YoSt 5100, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

The everyday life and lived experience of young people are used as levels of reality for understanding youth and to show the range of ideas, social institutions, and organizations that reflect the ordinary ways societies and cultures understand youth and seek to influence them. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr, Sec 1, Th, 6-9, VoTech R385, StP Campus, Baizerman

**VoEd 5430 LEADERSHIP IN YOUTH-SERVING ORGANIZATIONS.** 3 credits, §EdPA 5430, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Healthy youth development is the framework for understanding the history, philosophy, and tradition of formal and informal systems responsible for youth development in the community and the policy debates surrounding community-based youth development. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Spec Term, Sec 1, M, 6:30-9:30, Mar. 25, VoTech R250, StP Campus; off-campus sites and weekend classes arr at first class meeting; Walker, Schneider

**VoEd 5440 YOUTH DEVELOPMENT ISSUES IN WORK, FAMILY, AND COMMUNITY.** 3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

An examination of current issues related to the role of the work place, the family, and the community in the healthy development of youth. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Spec Term, Sec 1, M, 6:30-9:30, Sept. 25,

VoTech R250, StP Campus; off-campus sites and weekend classes arr at first class meeting; Stone

**VoEd 5450 SPECIAL TOPICS: CRITICAL PEDAGOGY.** 3 credits, §AdEd 5450, §FE 5001, §FE 5450, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Examination of critical pedagogy in school and adult education; application to education for family, work, community, and other topics of interest. **Must be taken S-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with AdEd 5450, FE 5001, 5450. A joint Day/Extension class limited to 5 Extension students)

Spring Qtr, ★○Sec 1, Th, 4-6:30, VoTech R380, StP Campus, McClelland

**VoEd 5490 SEMINAR IN YOUTH DEVELOPMENT.** 1-6 credits, §EdPA 5490, tuition\* each credit: Resident \$93.50; Non-resident \$271.15; Resident Graduate credit \$118; Non-resident Graduate credit \$259.60; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Designed to help youth workers and teachers employ the concept of healthy youth development as a framework for the discussion of public and organizational policy issues surrounding community-based youth development education. Emphasis on portfolio development. **Must be taken S-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr, Sec 1, Arr, Schneider  
Winter Qtr, Sec 2, Arr, Schneider  
Spring Qtr, Sec 3, Arr, Schneider

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**VoEd 5500 INTRODUCTION TO VOCATIONAL EDUCATION ADMINISTRATION.**

3 credits, §VoEd 5600, §AgEd 5026, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Basic concepts of structure, financing, program planning and evaluation, law and liability, personnel policies, and the management of vocational education programs. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, ★○Sec 1, M, 4-6:30, VoTech R385, StP Campus

**VoEd 5600 PLANNING VOCATIONAL EDUCATION.**

3 credits, §VoEd 5500, §AgEd 5026, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Context, definition, methods, and information needs in planning at national, state, and local education. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr, ★○Sec 1, M, 4-6:30, VoTech R385, StP Campus

**VoEd 5800 WORKING WITH SPECIAL NEEDS STUDENTS.**

3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Designed to help vocational instructors identify instruction for disadvantaged and handicapped students within regular classroom/laboratory settings. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Spring Qtr, ★○Sec 1, W, 4-6:30, VoTech R285, StP Campus, Brown

**VoEd 5808 DIVERSITY IN EDUCATION AND WORK SETTINGS.**

3 credits, §HRD 5808, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

A forum of exploring collaborative diversity-related issues simultaneously among educators and

Human Resource Development personnel. The nature of diverse populations, their unique learning/training needs, and effective diversity-related practices in education and work settings. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with HRD 5808. A joint Day/Extension class limited to 5 Extension students)

Winter Qtr, ★○Sec 1, W, 6:45-9:15, VoTech R385, StP Campus, Brown

**VoEd 5900 USING VOCATIONAL EDUCATION RESEARCH.**

3 credits, tuition\*: Resident \$280.50; Non-resident \$813.45; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

An introduction to the role of vocational education research in professional practice, significant problems of practice for research, alternative modes of research, and synthesis and application of the results of research. **Must be taken A-F.** (Prereq VoEd grad student or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Fall Qtr, ★○Sec 1, Th, 6:45-9:15, VoTech R280, StP Campus, Leske

Winter Qtr, ★○Sec 2, T, 4-6:30, VoTech R385, StP Campus, Copa

**Women's Studies (WoSt)**

(489 Ford Hall: 624-6006)

**College of Liberal Arts**

Textbooks for most WoSt courses are available at University of Minnesota Bookstore—East Bank in Williamson Hall (625-6000).

(See also Psychology; English; and Compleat Scholar noncredit courses)

- Pascale Bos, Teaching Assistant
- Kristine Butler, Teaching Assistant
- Caroljean Coventree, Instructor
- Lisa Collins, Teaching Assistant
- Patricia Faunce, Professor
- Duchess Harris, Teaching Assistant
- Judith Katz, Instructor
- April Knutson, Lecturer
- Patty Lynch, Instructor
- Doris Grieser Marquit, Lecturer
- Melissa Nambangi, Teaching Assistant
- Jane Olmsted, Teaching Assistant
- Polly Pagenhart, Teaching Assistant

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

Anne Phibbs, Teaching Assistant  
Susan Sundell, Teaching Assistant  
Kim Surkan, Teaching Assistant  
Martha Reis, Teaching Assistant  
Mari Trine, Teaching Assistant  
Jacquelyn Zita, Associate Professor

(For related courses of interest, also see the following departments in this Bulletin: Architecture; English; Family Social Science; General College; History; Humanities; Compleat and Practical Scholar noncredit courses; Psychology; Rhetoric; Social Work; Sociology)

**A minor is available in Women's Studies. Interested students should call CEE Counseling, 625-2500, for details.**

**Continuing Education for Women (CEW) sections available in the following courses:** WoSt 1001, 1003, 3205, 3307

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in Women's Studies. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**WoSt 1001, 1002 INTRODUCTION TO WOMEN'S STUDIES.** 4 credits each quarter, tuition\* each quarter: Resident \$318; Non-resident \$922.20.

Women's Studies as a discipline; feminist approaches to the current and rapidly changing conditions of women; multicultural focus. (No prereq. Limited to 40)

Winter Qtr, 1001, ★Sec 1, M, 9:30 a.m.-12, MacP, Butler. *Offered through Continuing Education for Women*

Spring Qtr, 1002, ★Sec 1, M, 6:20-8:50, FordH 150, Pagenhart

(See also CSch 0300, Our Founding Mothers: Early Suffragettes and Feminists)

**WoSt 1003 WOMEN IN WORLD CULTURES.** 4 credits, tuition\*: Resident \$318; Non-resident \$922.20.

The lives of women in non-Western societies, including their economic, political, and social contributions, familial roles, and status in society. (No prereq. Limited to 40)

Fall Qtr, ★Sec 1, M, 9:30 a.m.-12, MacP. *Offered through Continuing Education for Women*

**WoSt 3100 TOPICS IN FEMINIST THOUGHT, THEORY, AND METHODS: FEMINISM AND POSTMODERNISM.** 4 credits (max 12 cr), tuition\*: Resident \$344; Non-resident \$997.60.

Postmodern theory, specifically geared toward women's studies majors and minors, and other interested humanities students. General introduction of the most important concepts, theories, and theorists involved. (No prereq. Limited to 40)

Fall Qtr, ★Sec 1, Th, 6:20-8:50, FordH 150, Bos

**WoSt 3100 TOPICS IN FEMINIST THOUGHT, THEORY, AND METHODS: FEMINIST MOVEMENT SINCE 1967.** 4 credits (max 12 cr), tuition\*: Resident \$344; Non-resident \$997.60.

The North American women's liberation movement of the late 1960s studied as one of the most dynamic social change movements of the century. Political roots of the movement in the Civil Rights Movement and the New Left. Various strains—radical, liberal, cultural—of "second wave" feminism during the '60s and '70s. Revisioning of feminism from women of color and in the "sex wars" of the 1980s. Current feminist movement—from activist groups such as the Women's Action coalition to liberal organizations such as the National Organization for Women. Readings supplemented by guest lectures. (No prereq. Limited to 40)

Winter Qtr, ★Sec 2, Th, 6:20-8:50, FordH 130, Pagenhart

**WoSt 3102 FEMINIST THOUGHT AND THEORY.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Representative feminist theories and their relation to social and political action. (No prereq. Limited to 40)

Winter Qtr, ★Sec 1, T, 4-6:30, FordH 349, Collins

(See also CSch 0307, Women and Modern Political Thought)

**WoSt 3103 FEMINIST APPROACHES TO HISTORY.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

A comparative look at issues and problems in the study of women's history. Theoretical approaches, documents, and sources (written, oral, statistical) for understanding the female experience. (No prereq. Limited to 40)

Fall Qtr, ★Sec 1, M, 6:20-8:50, FordH 150, Reis

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**WoSt 3200 TOPICS IN WOMEN'S BIOLOGY, PSYCHOLOGY, AND SEXUALITY: MOTHERS AND DAUGHTERS.** 4 credits (max 12 cr), tuition\*: Resident \$344; Non-resident \$997.60.

Exploration of the mother-daughter relationship within societal, cultural, and historical frameworks. Social-psychological, cultural, historical, and literary sources will be used to understand the changing dimensions of this bond over time, and its richness within the complexities of gender, race, ethnicity, class, sexual orientation, and age. (No prereq. Limited to 40)

Winter Qtr, ★Sec 1, M, 5:30-8, FordH 285, Faunce

**WoSt 3202 BIOLOGY OF WOMEN.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60. (IS) Physiology, anatomy, and endocrine chemistry relevant to women's life cycles and reproductive functioning. (Prereq Biol 1009 or Phsl 1001 or #. A joint Day/Extension class limited to 20 Extension students)

Winter Qtr, ★Sec 1, M, 4-6:30, FordH 155, Zita

**WoSt 3204 SEXUALITY AND SELF-IMAGE.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Explores basic ideas about sexuality and intimacy such as gender and sexual identity; origin of ideas about "female sexuality"; roles of racial, ethnic, and other stereotypes in the regulation of sexuality; categories of human sexuality and their functions. Also considers eroticism, homophobia, sexual violence, pornography, romance, and desire. (Prereq 1001, 1002, 1003 or #. Limited to 40)

Fall Qtr, ★Sec 1, W, 6:20-8:50, FordH 130, Phibbs

(See also CSW 0900, Faces in the Mirror: Self-Esteem, Sexuality, and Self-Image)

**WoSt 3205 WOMAN: A SENSE OF IDENTITY.** 4 credits, \$5205, tuition\*: Resident \$344; Non-resident \$997.60.

Exploration of social and psychological factors which inhibit or enhance a woman's continuously developing sense of identity. Learning who you are, what you want, and how to take appropriate action. Exercises in power, body image, goal setting, and assertion skills in difficult situations. Journal writing, small-group work, and a project are part of the class requirements. Students are expected to attend all class sessions. Students will not be admitted after the first class meeting. *All sections offered through Continuing Education for Women.* (No prereq. No auditors. Limited to 34)

Fall Qtr, ★Sec 1, T, 6:10-9:10, Armory 202, Sundell

Fall Qtr, ★Sec 2, Th, 1:15-4:15, Armory 202, Sundell

Winter Qtr, ★Sec 3, T, 6:10-9:10, Armory 202, Sundell

Winter Qtr, ★Sec 4, Th, 1:15-4:15, Armory 202, Sundell

Spring Qtr, ★Sec 5, T, 6:10-9:10, Armory 202, Sundell

Spring Qtr, ★Sec 6, Th, 1:15-4:15, Armory 202, Sundell

**WoSt 3300 TOPICS IN WOMEN IN LITERATURE AND THE ARTS: WOMEN, ART, AND SOCIAL CHANGE.** 4 credits (12 cr max), tuition\*: Resident \$344; Non-resident \$997.60.

An examination of the history, tradition, and contemporary status of women visual, literary, musical, and performance artists as protestors, truth tellers, and troublemakers. Students will examine work of artists such as Kathe Kollwitz, Audre Lorde, the Guerilla Girls, Grace Palley, Faith Ringgold, and others through literature, film, video, and other media. Visits by local women artists and activists. (No prereq. Limited to 40)

Fall Qtr, ★Sec 1, M, 4-6:30, FordH 130, Katz

**WoSt 3300 TOPICS IN WOMEN IN LITERATURE AND THE ARTS: AFRICAN WOMEN WRITERS.** 4 credits (12 cr max), tuition\*: Resident \$344; Non-resident \$997.60.

Poetry, prose, and essay; full-length novels and short fiction. Attention paid to the newer and less known writers in order to see how themes are evolving, and how the themes reflect the concerns of African women today. Influence of folktales, folklore, and culture. What makes African women's writing different from the writings of other women. (No prereq. Limited to 40)

Winter Qtr, ★Sec 2, M, 4-6:30, FordH 55, Nambangi

**WoSt 3300 TOPICS IN WOMEN IN LITERATURE AND THE ARTS: WOMEN, PERFORMANCE, AND IDENTITY.** 4 credits (12 cr max), tuition\*: Resident \$344; Non-resident \$997.60.

Political relationship between performance and identity through a consideration of original texts, feminist postmodern theory, and reviews of performance pieces. Impact of race, class, gender, and sexuality on performance. (No prereq. Limited to 40)

Winter Qtr, ★Sec 3, T, 6:20-8:50, FordH 155, Surkan

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**WoSt 3300 TOPICS IN WOMEN IN LITERATURE AND THE ARTS: EMERGING LITERATURES: Women Writing Colonial Oppression and Postcolonial Struggles for Equality.** 4 credits (12 cr max), tuition\*: Resident \$344; Non-resident \$997.60.

Autobiographical and fictional accounts written by women of former colonies about the economic, political, and cultural oppression they suffer under colonialism, and their continuing struggles for equality in the postcolonial era. (No prereq. Meets concurrently with 5300. Limited to a combined total of 40)

Spring Qtr, ★Sec 4, W, 6:20-8:50, FordH 120, Knutson

**WoSt 3300 TOPICS IN WOMEN IN LITERATURE AND THE ARTS: MOTHERS, MADONNAS, AND MONSTERS.** 4 credits (12 cr max), tuition\*: Resident \$344; Non-resident \$997.60.

Roles and scenarios of women characters in drama using play scripts and movies. High and pop culture are mixed to create a visceral and a literary understanding of the subject. Archetypal roles of women in drama. (No prereq. Limited to 40)

Spring Qtr, ★Sec 5, Th, 6:20-8:50, FordH 130, Lynch

**WoSt 3306 U.S. MINORITY WOMEN WRITERS.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Analysis of poetry, fiction, and drama written by minority women in the United States. (Prereq 8 cr WoSt or 4 cr WoSt and 4 cr literature, American Studies, Chicano Studies, Afro-American Studies, or American Indian Studies. Limited to 40)

Fall Qtr, ★Sec 1, Th, 4-6:30, FordH 155, Olmsted

**WoSt 3307 MODERN FEMINIST NOVEL.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Analysis of fiction written by women that addresses questions of women's identity and the diversity of women's experience. (Prereq introductory work in literature. Limited to 40)

Spring Qtr, ★Sec 1, M, 9:30 a.m.-12, MacP, Marquit. *Offered through Continuing Education for Women*

**WoSt 3400 TOPICS IN COMPARATIVE STUDY OF WOMEN: WOMEN AND POPULAR CULTURE.** 4 credits (max 12 cr), tuition\*: Resident \$344; Non-resident \$997.60.

Examination of sex roles and stereotypes engendered by popular American culture, including television, "entertainment" films, pop music, magazines, and pornography. Through films, video, audio tapes, and guest speakers, class participants will define ways in which women are used in this culture to amplify and enforce sex roles and stereotypes, and consequently reinforce the status quo. (No prereq. Limited to 40)

Winter Qtr, ★Sec 1, M, 6:20-8:50, FordH 130, Katz

**WoSt 3404 LESBIAN CULTURES.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

Theoretical and historical readings combined with literature, music, and art; emphasis placed on cultural contexts within which lesbian cultures exist. (Prereq 8 cr Women's Studies or #. Limited to 40)

Winter Qtr, ★Sec 1, W, 4-6:30, FordH 285, Trine  
(See also CSW 0901, *Beyond the Coming Out Story: A Weekend of Reading, Writing, and Reflection*)

**WoSt 3406 WOMEN, RACE, AND CLASS IN THE U.S.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60.

In-depth historical analysis of social constructions of race, class, and gender. Examination of racism, class bias, and sexism as systems of oppression that relate to anti-Semitism and heterosexism. (Prereq 1001, 1002 or 1003 or major or #. Limited to 40)

Spring Qtr, ★Sec 1, T, 5:30-8, FordH 120, Harris  
**WoSt 3500 TOPICS IN WOMEN, PUBLIC POLICY, AND THE LAW: WORKING CLASS AND POOR WOMEN'S LIVES.** 4 credits (max 12 cr), tuition\*: Resident \$344; Non-resident \$997.60.

How current public policies (such as federal and state laws, regulations, executive orders, court decisions) affect poor class and working class women's daily lives. Access to food, housing, health care, jobs, education, transportation, money, legal representation, and debates on public policy reform will be analyzed. (No prereq. Limited to 40)

Spring Qtr, ★Sec 1, T, 6:20-8:50, FordH 150, Coventree

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

**WoSt 5103 FEMINIST PEDAGOGY.** 4 credits, tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

Theory and practice of feminist teaching and learning as a system of inquiry. Emphasizes challenges raised by the diversity of women's experiences and perspectives. (Prereq 8 cr Women's Studies or #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 20)

Spring Qtr, ★Sec 1, T, 4:30-7:30, ApH 127, Zita

**WoSt 5300 TOPICS IN WOMEN IN LITERATURE AND THE ARTS: EMERGING LITERATURES: Women Writing Colonial Oppression and Postcolonial Struggles for Equality.** 4 credits (max 12 cr), tuition\*: Resident \$344; Non-resident \$997.60; Resident Graduate credit \$472; Non-resident Graduate credit \$1038.40; Resident Graduate School credit \$862; Non-resident Graduate School credit \$1896.40.

See description for 3300 sec 4. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3300 sec 4. Limited to a combined total of 40)

Spring Qtr, ★Sec 1, W, 6:20-8:50, FordH 120, Knutson

## Youth Studies (YoSt)

(386 McNeal Hall: 624-3700)

### College of Human Ecology

(School of Social Work)

Textbooks for most YoSt courses are available at University of Minnesota Bookstore—St. Paul (624-9200).

(See also Anth 5920, Topics in Anthropology: Anthropology of AIDS; Education; Family Social Science; PubH 5010, Public Health Approach to AIDS; Social Work; and REX 0511, Youth Development Study)

Michael Baizerman, Professor  
 Jerome Beker, Professor  
 Mary K. Burnison, Coordinator and Instructor  
 Jean Burkhardt, Lecturer  
 Jack Kirkland, Visiting Professor  
 Don Le Tourneau, Lecturer  
 Ira M. Lourie, Visiting Professor  
 Jan Mandell, Lecturer  
 Diane Olson, Lecturer  
 Jerry Stein, Lecturer  
 James Toole, Lecturer

**Joint Day/Extension Classes**—You may register through Extension for certain day school classes scheduled before 4 p.m. in YoSt. For a copy of the current daytime Class Schedule and procedures for registration through Extension, call 624-2388 two weeks before mail registration for that quarter begins.

**YoSt 1000 INTRODUCTION TO YOUTH STUDIES: THE EVERYDAY LIVES OF ADOLESCENTS AND YOUTH.** 3 credits, tuition\* (includes \$10 course fee): Resident \$248.50; Non-resident \$701.65.

Introduction to the issues of youth and adolescents in their everyday lives. Policies, programs, and services for youth and adolescents. (No prereq. A joint Day/Extension class limited to 30 Extension students)

Spring Qtr, ★Sec 1, M, 3-6, McNH 146, StP Campus, Baizerman

**YoSt 3100 INTRODUCTION TO YOUTH WORK.** 3 credits, tuition\* (includes \$10 course fee): Resident \$268; Non-resident \$758.20.

Exploration of settings in which youth work is done—schools, informal education, juvenile justice, mental and physical health organizations, religious organizations. Key issues, policy and programmatic responses; philosophy, values, roles, tasks of youth worker, and career patterns. (No prereq. Limited to 35)

Fall Qtr, ★Sec 1, Th, 6-8:30, McNH 386A, StP Campus, Le Tourneau

**YoSt 5100 YOUTH IN THE WORLD.** 3 credits, tuition\* (includes \$10 course fee): Resident \$268; Non-resident \$758.20; Resident Graduate credit \$364; Non-resident Graduate credit \$788.80; Resident Graduate School credit \$656.50; Non-resident Graduate School credit \$1432.30.

A basic theoretical and conceptual framework for understanding adolescence; adolescents and youth in the context of everyday life—in school, at play, in the community, at home. (Prereq YoSt 5330 or CPsy 3303. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 20 Extension students)

Fall Qtr, ★Sec 1, M, 3-6, McNH 386A, StP Campus, Baizerman

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**YoSt 5120 INDEPENDENT STUDY IN YOUTH STUDIES.** Cr arr. (maximum 12 cr), tuition\* each credit: Resident \$86; Non-resident \$249.40; Resident Graduate credit \$118; Non-resident Graduate credit \$259.60; Resident Graduate School credit \$215.50; Non-resident Graduate School credit \$474.10.

Independent reading and/or research under faculty supervision. No late fees for Independent Study. (Prereq #. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr, Sec 1, Arr, Baizerman, Beker, Burnison

Winter Qtr, Sec 2, Arr, Baizerman, Beker, Burnison

Spring Qtr, Sec 3, Arr, Baizerman, Beker, Burnison

**YoSt 5130 SPECIAL TOPICS: PEER HELPING —THE THEORY AND PRACTICE OF YOUTH HELPING YOUTH.** 3 credits, tuition\* (includes \$10 course fee): Resident \$268; Non-resident \$758.20; Resident Graduate credit \$364; Non-resident Graduate credit \$788.80; Resident Graduate School credit \$656.50; Non-resident Graduate School credit \$1432.30.

Experientially based class provides practical preparation for those interested in starting or improving a Peer Helping Program in schools or community-based organizations which involve school-aged youth helping their classmates in a variety of roles such as tutors, mentors, counselors, conflict mediators, and educators. It focuses on basic theory and concepts, program organizational issues, experiential student training, and the adult leadership skills required to lead such a program. (Prereq 6 cr in social sciences, experience in youth work or teaching. Qualified students may register for graduate credit at the University of Minnesota. Limited to 20)

Winter Spec Term, ★Sec 1, FSa, 8:30 a.m.-4:30,

Jan. 26, 27, Feb. 23, 24, 1996, McNH 386A,

StP Campus, Toole. *No late fee through Jan.*

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**YoSt 5130 SPECIAL TOPICS: EXPERIENTIAL EDUCATION FOR CITIZEN DEVELOPMENT: National Youth Service.** 3 credits, tuition\* (includes \$10 course fee): Resident \$268; Non-resident \$758.20; Resident Graduate credit \$364; Non-resident Graduate credit \$788.80; Resident Graduate School credit \$656.50; Non-resident Graduate School credit \$1432.30.

Examination of rationale and program designs for involving young adults in hands-on community service programming comparable in philosophy to the Civilian Conservation Corps and the Peace

Corps. A focus on within-school, community service learning models. One-day practicum experience on Saturday. (Prereq 6 cr in social sciences, experience in youth work. Qualified students may register for graduate credit at the University of Minnesota. Limited to 20)

Winter Spec Term, ★Sec 2, FSa, 8:30 a.m.-4:30,

Feb. 2, 3, Mar. 2, 1996, McNH 386A, StP

Campus, Burkhardt. *No late fee through Jan.*

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**YoSt 5130 SPECIAL TOPICS: EXPERIENTIAL LEARNING: Theatre Activities in Youth Work and Education.** 3 credits, tuition\* (includes \$15 course fee): Resident \$273; Non-resident \$763.20; Resident Graduate credit \$369; Non-resident Graduate credit \$793.80; Resident Graduate School credit \$661.50; Non-resident Graduate School credit \$1437.30.

Empowering methods of personal/creative development using experiential learning and theatre activities to enhance creativity and imagination of youth workers and educators. A seminar that examines new approaches to working with youth in school and youth agency settings, combined with application of experiential learning and improvisational theatre theory and praxis. Three full days. One-day practicum experience with high school students. (Prereq 6 cr in social sciences, experience in youth work or teaching. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25)

Spring Spec Term, ★Sec 3, FSa, 8:30 a.m.-4:30,

Apr. 12, 13, May 4, 1996, McNH 386A, StP

Campus, Mandell. *No late fee through Apr. 5*

**YoSt 5130 SPECIAL TOPICS: PERSONAL DEVELOPMENT AND EXPERIENTIAL EDUCATION: High Intensity Outdoor Adventure.** 3 credits, tuition\* (includes \$25 course fee): Resident \$283; Non-resident \$773.20; Resident Graduate credit \$379; Non-resident Graduate credit \$803.80; Resident Graduate School credit \$671.50; Non-resident Graduate School credit \$1447.30.

Empowering methods of personal development using challenging, high-risk outdoor methods are examined. Emphasis on historical and theoretical roots and program designs, including Outward Bound; leadership training. One-day outdoor practicum experience on Saturday. (Prereq 6 cr in social sciences, experience in youth work. Qualified students may register for graduate credit at the University of Minnesota. Limited to 20)

Spring Spec Term, ★Sec 4, FSaM, 8 a.m.-4:30,

Apr. 19, 20, 22, 1996, McNH 386A, StP

Campus. *No late fee through Apr. 12*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.



**YoSt 5132 EXPERIENTIAL LEARNING.** 3 credits, tuition\* (includes \$15 course fee): Resident \$273; Non-resident \$763.20; Resident Graduate credit \$369; Non-resident Graduate credit \$793.80; Resident Graduate School credit \$661.50; Non-resident Graduate School credit \$1437.30.

Rationale for and purposes of experiential learning in schools and youth-serving agencies. Development and implementation of experiential programs for adolescents. Evaluation of experiential-learning programs. Each student will develop a plan for an experiential program for teenagers. (Prereq YoSt 5330 or CPsy 3303 and #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25)

Spring Spec Term, ★Sec 1, FSa, 8:30 a.m.-4:30, May 10, 11, June 1, 1996, McNH 386, StP Campus, Burnison. *No late fee through May 3*

**YoSt 5200 YOUTH POLICY: ENHANCING HEALTHY DEVELOPMENT IN EVERYDAY LIFE.** 3 credits, tuition\* (includes \$10 course fee): Resident \$268; Non-resident \$758.20; Resident Graduate credit \$364; Non-resident Graduate credit \$788.80; Resident Graduate School credit \$656.50; Non-resident Graduate School credit \$1432.30.

Youth policy typically is grounded to problems and risks and is specific to human services domains such as education, health, juvenile justice, and employment. This course will create youth policy directed at enhancing healthy development through community building, program development, and other strategies. (Prereq 6 cr social sciences, experience working with youth. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 20 Extension students)

Winter Qtr, ★○Sec 1, W, 3-6, McNH 386A, StP Campus, Baizerman

**YoSt 5201 YOUTH WORK PRACTICE: INTERNSHIP AND SEMINAR.** 4 credits, tuition\* (includes \$10 course fee): Resident \$354; Non-resident \$1007.60; Resident Graduate credit \$482; Non-resident Graduate credit \$1048.40; Resident Graduate School credit \$872; Non-resident Graduate School credit \$1906.40.

Two-hour seminar and 16 hours of fieldwork each week. Students reflect on and integrate knowledge about youth with ongoing experience in work with youth. (Prereq Soc 1001, Psy 1001, YoSt 5330 and #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 20)

Fall Qtr, ★Sec 1, T, 3:30-5:30, McNH 386A, StP Campus, Burnison

**YoSt 5202 YOUTH WORK PRACTICE: INTERNSHIP AND SEMINAR.** 4 credits, tuition\* (includes \$10 course fee): Resident \$354; Non-resident \$1007.60; Resident Graduate credit \$482; Non-resident Graduate credit \$1048.40; Resident Graduate School credit \$872; Non-resident Graduate School credit \$1906.40.

Two-hour seminar and 16 hours of fieldwork each week. Students reflect on and integrate knowledge about youth with ongoing experience in work with youth. (Prereq YoSt 5201 and #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 20)

Winter Qtr, ★Sec 1, T, 3:30-5:30, McNH 386A, StP Campus, Burnison

**YoSt 5203 YOUTH WORK PRACTICE: INTERNSHIP AND SEMINAR.** 4 credits, tuition\* (includes \$10 course fee): Resident \$354; Non-resident \$1007.60; Resident Graduate credit \$482; Non-resident Graduate credit \$1048.40; Resident Graduate School credit \$872; Non-resident Graduate School credit \$1906.40.

Two-hour seminar and 16 hours of fieldwork each week. Students reflect on and integrate knowledge about youth with ongoing experience in work with youth. (Prereq Soc 1001, Psy 1001, YoSt 5330 and #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 20)

Spring Qtr, ★Sec 1, T, 3:30-5:30, McNH 386A, StP Campus, Burnison

**YoSt 5230 WORK WITH YOUTH—INDIVIDUAL.** 3 credits, tuition\* (includes \$10 course fee): Resident \$268; Non-resident \$758.20; Resident Graduate credit \$364; Non-resident Graduate credit \$788.80; Resident Graduate School credit \$656.50; Non-resident Graduate School credit \$1432.30.

Examination of basic assumptions underlying work with youth. Emphasis on how adolescents, in particular, learn to get along with themselves. Attention to special issues and concerns of adolescents and of persons who work with them. This first course in a three-quarter sequence will emphasize work on a one-to-one basis. Class meets three full days. (Prereq Soc 1001, Psy 1001, CPsy 3303. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25)

Fall Spec Term, ★Sec 1, FSaM, 8:30 a.m.-4:30, Oct. 6, 7, 9, 1995, McNH 386A, StP Campus.

*No late fee through Sept. 29*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Course Descriptions

**YoSt 5231 WORK WITH YOUTH—FAMILIES.** 3 credits, tuition\* (includes \$5 course fee): Resident \$263; Non-resident \$753.20; Resident Graduate credit \$359; Non-resident Graduate credit \$783.80; Resident Graduate School credit \$651.50; Non-resident Graduate School credit \$1427.30.

Theories and techniques of therapy with adolescents and their families. Emphasis on practical methods of structural change; developing effective communication, decision-making, and problem-solving systems; winning the family's cooperation; and the role of the therapist in family therapy. Class meets three full days. (Prereq 5230, FSoS 5200. Qualified students may register for graduate credit at the University of Minnesota. Limited to 20)

Spring Spec Term, ★Sec 1, FSaM, 8:30 a.m.-4:30, May 17, 18, 20, 1996, McNH 386A, StP Campus, Lourie. *No late fee through May 10*

**YoSt 5232 WORK WITH YOUTH—GROUPS.** 3 credits, tuition\* (includes \$5 course fee): Resident \$263; Non-resident \$753.20; Resident Graduate credit \$359; Non-resident Graduate credit \$783.80; Resident Graduate School credit \$651.50; Non-resident Graduate School credit \$1427.30.

The purpose of this course is to help practitioners with adolescents to: 1) increase their knowledge and understanding of adolescent group needs and associations; 2) increase knowledge of group process; and 3) enhance skill in working with groups of adolescents in the community, in group living situations, and in group therapy. Class meets three full days. (Prereq 5230. Qualified students may register for graduate credit at the University of Minnesota. Limited to 20)

Winter Spec Term, ★Sec 1, FSaM, 8:30 a.m.-4:30, Jan. 19, 20, 22, 1996, McNH 386A, StP Campus, Kirkland. *No late fee through Jan. 12*

**YoSt 5300 COMMUNITY BUILDING TO ENHANCE THE HEALTHY DEVELOPMENT OF YOUTH IN EVERYDAY LIFE.** 3 credits, tuition\* (includes \$10 course fee): Resident \$268; Non-resident \$758.20; Resident Graduate credit \$364; Non-resident Graduate credit \$788.80; Resident Graduate School credit \$656.50; Non-resident Graduate School credit \$1432.30.

Community is a major context of adolescents and youth life, and community-building is a major strategy for healthy development. Recent foundation and government reports support this approach. The course will explore these readings with an eye to the issues and practical problems of community building. (Prereq 6 cr social sciences, experience working with youth. Qualified students may register for graduate credit at the University of Minnesota. Limited to 20)

Spring Qtr, ★Sec 1, W, 3-6, McNH 386A, StP Campus

**YoSt 5312 SEMINAR: DIRECT WORK WITH ADOLESCENTS.** 3 credits, \$SW 5312, tuition\*: Resident \$258; Non-resident \$748.20; Resident Graduate credit \$354; Non-resident Graduate credit \$778.80; Resident Graduate School credit \$646.50; Non-resident Graduate School credit \$1422.30.

Designed to give students an understanding of direct work with troubled and at-risk adolescents in a wide range of settings in which social workers are typically involved. The emphasis will be on young people in groups in the "life space," in everyday life, rather than in one-to-one, office-based interactions. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 5 Extension students)

Fall Qtr, ★Sec 1, Th, 5-8, McNH 386, StP Campus, Bekker

**YoSt 5330 CHILD AND ADOLESCENT PSYCHOLOGY FOR PRACTITIONERS.** 3 credits, tuition\* (includes \$10 course fee): Resident \$268; Non-resident \$758.20; Resident Graduate credit \$364; Non-resident Graduate credit \$788.80; Resident Graduate School credit \$656.50; Non-resident Graduate School credit \$1432.30.

Course includes application of theory and research about children and adolescents, including how findings can be used and how theories facilitate understanding of behavior. (Prereq courses in educational psychology, child or adolescent psychology. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25)

Fall Qtr, ★Sec 1, W, 4:30-7, McNH 386A, StP Campus, Olson

**YoSt 5331 YOUTH AGENCIES, ORGANIZATIONS AND YOUTH SERVICE SYSTEM.** 3 credits, tuition\* (includes \$10 course fee): Resident \$268; Non-resident \$758.20; Resident Graduate credit \$364; Non-resident Graduate credit \$788.80; Resident Graduate School credit \$656.50; Non-resident Graduate School credit \$1432.30.

Overview of major forms of youth agencies and organizations, sources of agency legitimacy, ideologies and values, goals. Relations between and among agencies and organizations. Roles of adults and youth; professionals and nonprofessionals; paid staff and volunteers; youth participation; legal and ethical issues. Examples of existing and ideal agencies, excluding schools. (Prereq two courses in sociology/anthropology and work experience in a youth agency or organization. Qualified students may register for graduate credit at the University of Minnesota. Limited to 20)

Winter Qtr, ★Sec 1, T, 6:30-9, McNH 386A, StP Campus, Stein

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

\* Tuition definitions of Resident and Non-resident explained on page 24.

## Continuing Education for Women (CEW)

Telephone 624-5267 for more information.

### Noncredit Courses

The University of Minnesota has a long history of involvement in women's education. Continuing Education for Women continues this tradition by offering quality, innovative, and timely programs using University resources. As part of the Compleat Scholar (CSch) and Practical Scholar (PSch) curriculum, CEW regularly offers noncredit courses to meet women's needs and interests in an ever-changing society.

### Credit Courses

Credit classes meet once a week, usually during the day, at off-campus locations. Course content and materials, work expected of students, and responsibilities of instructors are determined by the academic discipline granting the credit. Courses are expected to have the integrity and legitimacy of campus-based day classes for equivalent credit.

The following list of credit classes offered through CEW during the academic year are grouped by quarter. For complete course descriptions and prerequisites, refer to the individual department listings. For example, for Psy 3201, refer to Psychology and the CEW section number. Credit classes begin on page 55.

For registration procedures, dates, and locations, see the When and How to Register section of this Bulletin. Credit classes begin the first week of the term, and follow regular late fee dates.

#### Fall Quarter 1995:

|            |         |  |
|------------|---------|--|
| AmSt 1001  | sec 2   | American Cultures  |
| ArtH 5769  | sec 1   | Connoisseurship in Oriental Art                          |
| Biol 1101  | sec 1   | Heredity and Human Society                               |
| Comp 1011  | sec 5   | Writing Practice I                                       |
| Engl 1018  | sec 1   | Introduction to Modern Fiction                           |
| Jour 1001  | sec 1   | Introduction to Mass Communication                       |
| Math 1031  | sec 1   | College Algebra and Probability                          |
| Phil 1003  | sec 1   | Ethics   |
| Psy 1001   | sec 4   | Introduction to Psychology                               |
| Span 1101  | sec 4   | Beginning Spanish  |
| Spch 1101  | sec 1   | Fundamentals of Speech-Communication: Oral Communication |
| WoSt 1003  | sec 1   | Women in World Cultures                                  |
| WoSt 3205, | sec 1,2 | Woman: A Sense of Identity                               |

#### Winter Quarter 1996:

|           |         |  |
|-----------|---------|--|
| Anth 1102 | sec 2   | Introduction to Social and Cultural Anthropology |
| Clas 1042 | sec 2   | Greek and Roman Mythology                        |
| Engl 3851 | sec 2   | The English Language                             |
| Hum 1003  | sec 1   | Humanities in the Modern West III                |
| Hum 3003  | sec 1   | Humanities in the Modern West III                |
| LASk 1501 | sec 3   | Returning to Learning                            |
| Pol 3051  | sec 1   | Introduction to Political Analysis               |
| Psy 3101  | sec 2   | Introduction to Personality                      |
| Soc 3501  | sec 1   | The Family System                                |
| Span 1102 | sec 4   | Beginning Spanish                                |
| WoSt 1001 | sec 1   | Introduction to Women's Studies                  |
| WoSt 3205 | sec 3,4 | Woman: A Sense of Identity                       |

#### Spring Quarter 1996:

|           |         |                                      |
|-----------|---------|--------------------------------------|
| ArtH 3142 | sec 1   | Art of Egypt                         |
| Clas 3142 | sec 1   | Art of Egypt                         |
| Comp 1001 | sec 17  | Writing Practice I                   |
| Engl 3455 | sec 2   | American Short Story                 |
| GC 1511   | sec 1   | Introduction to Business and Society |
| Hist 3051 | sec 2   | Ancient Civilization                 |
| Math 1131 | sec 4   | Finite Mathematics                   |
| PBio 1012 | sec 2   | Plants Useful to Humans              |
| Psy 3604  | sec 5   | Introduction to Abnormal Psychology  |
| Span 1103 | sec 4   | Beginning Spanish                    |
| WoSt 3205 | sec 5,6 | Woman: A Sense of Identity           |
| WoSt 3307 | sec 1   | Modern Feminist Novel                |



# Noncredit Programs

## The Compleat Scholar

Telephone 624-8880 for information.

The Compleat Scholar (CSch) celebrates the world of ideas in a noncredit liberal arts curriculum designed for adults who want to enjoy a lifetime of learning. Explore a wide range of topics in the arts, sciences, literature, writing, history, philosophy, and humanities without the added concern of grades, exams, and credits. Benefit from the expertise of University faculty, graduate students, and community professionals, as well as from interaction with fellow learners of assorted ages and backgrounds.

Whether you're pursuing a new interest or seeking an opportunity to return to ideas previously studied, you'll find courses offered at convenient times and locations, both on campus and at various sites in the Twin Cities. The program provides learning in comfortable settings and stimulating formats including lecture, discussion, studio and lab work, field trips, and retreats. See the following pages for more information about Compleat Scholar courses.

## The Practical Scholar

Telephone 624-8880 for information.

The Practical Scholar (PSch) offers practical and applied knowledge to address concerns and interests in your personal or professional life. Develop skills in communication and foreign languages, finance and investments, career development and change, wellness and nutrition, personal relationships, gardening and landscaping, home design, preparing and succeeding in graduate and undergraduate studies, and other areas.

As in the Compleat Scholar, these classes use the expertise of University faculty and staff as well as community resources. Courses are also offered at convenient times and locations, and in several formats. There are no admission or entrance requirements—you need only a desire to learn. See the following pages for more information about the Practical Scholar.

## Cooperative Noncredit Offerings

Many Compleat and Practical Scholar courses are offered in cooperation with other University and non-University educational resources. Special tuition discounts may be offered to members of those resources; see the descriptions of the courses listed below for specific information.

*Bell Museum of Natural History:* CSch 0393, 0500, 0516, 0521, 0527, 0528, 0529, 0530, 0536, 0537, 0580, PSch 0965, 0966

*Minnesota Zoo:* CSch 0522, 0523, 0525

*Walker Art Center:* CSch 0100, 0103, 0106, 0261

*Minneapolis Institute of Arts:* CSch 0102, 0110, 0195, 0262

*Minnesota Landscape Arboretum:* CSch 0450, 0451, 0452, 0453, PSch 0961, 0984, 0986

*Minnesota Historical Society:* CSch 0308

*Woman's Club of Minneapolis:* CSch 0300, 0315, 0351, 0455, 0477

*Weisman Art Museum:* CSch 0104, 0105, 0108, 0196

*Intermedia Arts:* CSch 0282, 0283, 0284

*Jewish Community Center of Greater St. Paul:* CSch 0358

*Minnesota Horticultural Society:* PSch 0954, 0969, 0982, 0984

*Minnesota Museum of American Art:* CSch 0199

*Penumbra Theatre:* CSch 0232

## Registration in Compleat and Practical Scholar Courses

Unless otherwise noted, registration procedures, dates, and locations are the same as for credit registration for fall, winter, and spring quarters. See the When and How to Register section of the Bulletin for details. Late registrations for noncredit classes must be accompanied by a late fee. See page 13. Late registration dates are listed with course descriptions for each noncredit class. See page 471 for Compleat Scholar Weekend registration information.

## Noncredit Courses

### Books for Compleat and Practical Scholar Courses

When books are suggested or required for a class, they will usually be available for purchase at the University of Minnesota Bookstore—East Bank in Williamson Hall. See bookstore hours on page 18.

### Tuition for Compleat and Practical Scholar Courses

See course descriptions for tuition charges for each course.

**University employees** who wish to take noncredit classes must pay half the regular tuition plus any special costs or fees (Compleat Scholar Weekends not included). Eligible employees are those working at least 75-percent time in an ongoing or temporary appointment; working 100-percent time during the period for which the course is held if on a 9-month or 11-month appointment; and those on maternity or other leaves without pay. Employees on student appointments, family members of University employees, and laid-off employees are not eligible for this reduced tuition plan. When registering, employees must submit a letter from their supervisor or the head of their department verifying employment. For limited-enrollment classes, employee registrations will be accepted starting the first day of in-person registration. For nonlimited classes, employees may register during the regular registration periods.

**Persons 62 and older** receive a 10-percent discount on many noncredit classes. When available, the discount is listed in the course price information. **Persons who have current memberships** with Walker Art Center, Minneapolis Institute of Arts, Bell Museum, Minnesota Zoo, Woman's Club of Minneapolis, Frederick R. Weisman Art Museum, Minnesota Museum of American Art, Minnesota Historical Society, Women's Club of Minneapolis, Jewish Community Center of Greater St. Paul, Minnesota Horticultural Society, and Minnesota Landscape Arboretum receive 10-percent discounts in classes offered cooperatively with these organizations (see individual course descriptions for tuition). Only one 10-percent discount may be applied to each registration. Participants pay full course and special fees, if any.

No third-party billing is permitted for noncredit classes. Please enclose a check or money order or

credit card authorization for payment (see registration form for details).

### Frequent Learner Discount

Students who register and pay regular tuition for a fall 1995 CSch or PSch course are eligible for a 10-percent discount off the regular tuition of one winter or spring 1996 CSch and PSch course. To receive the discount, students must include a copy of their fall fee statement with their winter or spring registration form. This offer does not apply to courses taken at reduced-tuition rates in the fall or to Compleat Scholar Weekend courses, and participants pay full course or special fees, if any. This discount may not be combined with other reduced-tuition options.

**PLEASE NOTE**—There are no tuition discounts for Compleat Scholar Weekends.

### Refund Schedule for Compleat and Practical Scholar Courses

Students who wish to cancel registration in a course must do so officially, either in person or by writing to Extension Classes, 101 Westbrook Hall, University of Minnesota, 77 Pleasant Street S.E., Minneapolis, MN 55455. By doing so, they will, if eligible, receive a refund according to the following schedule:

|                    |  |
|--------------------|--|
| 1 session class    | 100% before class meets<br>0% after class has met  |
| 2 session class    | 100% before class meets<br>0% after first class  |
| 3-4 session class  | 100% before class meets<br>50% before second class<br>0% after                           |
| 5 or more sessions | 100% before class meets<br>75% before second class<br>50% before third class<br>0% after |

Refund requests for one- or two-day classes or seminars must be received in writing or in person three working days in advance of the class. Registrants who fail to attend or to cancel properly are liable for the entire fee. Late fees are not refundable in any case.

## Variety



Because you lead a busy life and have many demands on your time, Compleat and Practical Scholar courses come in a variety of formats to fit your schedule. Select from morning, afternoon, and evening classes—some on campus, others in convenient neighborhood sites. Some courses meet on Saturday, several feature retreat-type settings, and others are quite brief and focused, involving just a meeting or two and perhaps a field trip. Choose one or several courses/locations convenient for you.

### Morning Classes

- 0477 A Poet's Armchair Tour of the British Isles—  
England, Scotland, Wales  
0347 Rise of Civilization: The Old World  
0300 Our Founding Mothers: Early Suffragettes and  
Feminists

### Afternoon Classes

- 0195 Conservation of Paintings  
0355 What is Human Nature?  
0287 Cinema Art and Style in the 1930s

### Evening Classes

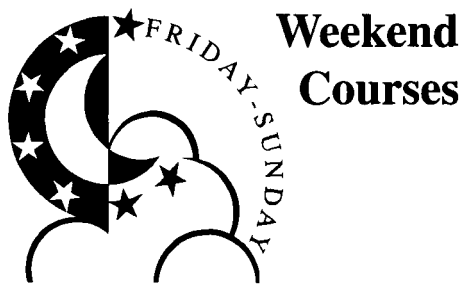
- 0104 Jacob Lawrence: American Painter and  
Printmaker  
0565 Laser—the Light Fantastic!  
0380 Crisis Theology: God Against Religion  
0409 Photography as Text: Using Photos as Writing  
Prompts  
0635 Better Reading: Gaining Speed and  
Comprehension

### Saturday Classes

- 0820 Creativity and the Myers-Briggs  
0450-0453 Minnesota Writers Series  
0163 Combining the Arts of Japan: Haiku and  
Papermaking

### Courses With Field Trips

- 0309 American Indian Tribal Government  
0551 Minnesota Geology: 3.6 Billion Years and  
Counting  
0987 Splendor Under Glass: Great Conservatories of  
the Upper Midwest



## Weekend Courses

Spend uninterrupted time reading a book, discussing a challenging idea, or studying with an expert. Compleat Scholar Weekends (CSW) combine the pleasures of learning with a weekend retreat away from it all. Each weekend is led by a University of Minnesota faculty member or community professional, is limited in size to allow small group conversations, and is held at a comfortable retreat center or lodge with recreational facilities to enjoy during your free time.

### Fall

- 0800 What Is Our Responsibility to the Environment  
(Oct. 13-15)  
0801 Mid-Life Career Audit: Deciding What to Do  
With the Rest of Your Life (Nov. 3-5)

### Winter

- 0900 Faces in the Mirror: Self-Esteem, Sexuality,  
and Self-Image (Feb. 2-4)  
0802 The Beginning and the End of the Universe  
(Mar. 1-3)

### Spring

- 0700 Spring Wildflower Weekend (Apr. 27-28)  
0701 Anatomy of a Trout Stream (May 18-19)  
0702 Wildflowers of the North Shore (June 14-16)  
0901 Beyond the Coming Out Story: A Weekend of  
Reading, Writing, and Reflection (Mar. 29-31)

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## Noncredit Courses

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## Minnesota Scholar

Examine Minnesota's various cultures and ethnic groups, its natural and social environment, and its history. Learn what makes Minnesota interesting through slide lectures and discussions, as well as field trips and excursions to historic sites. Understand more about where you live.

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### Fall

- |      |   |
|------|---|
| 0315 | Minnesota's Milling Giants: Pillsbury, Peavey, and Washburn   |
| 0521 | Where are they Now? Native Animals of the Metropolitan Region |
| 0536 | Fall Wildflowers and Grasses of Minnesota                     |
| 0178 | Distinctive Twin Cities Religious Architecture                |

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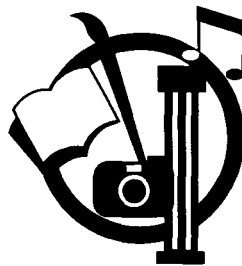
### Winter

- |      |  |
|------|--|
| 0311 | Woodland Indian Storytelling                         |
| 0478 | Fitzgerald and the Jazz Age                          |
| 0965 | Growing Wildflowers and Native Plants in Your Garden |

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### Spring

- |      |  |
|------|--|
| 0345 | Archaeology of Minnesota   |
| 0350 | Historic Minneapolis: A Walking Tour   |
| 0950 | Landscaping the Minnesota Home Grounds   |
| 0529 | Introduction to Ornithology: Natural History, Ecology, and Identification of Minnesota Birds |



## Arts and Letters

Travel back to the future through film or play with paints. Write a poem, keep a journal, or develop a photograph. Listen with new enjoyment and understanding to diverse types of music—from the blues to the Beatles, from opera to organ music. Examine style and meaning in the work of various artists as different as Grant Wood and Andy Warhol, Christo and Yves Klein, or Titian and Turner. Compare voice, technique, and message of writers like Fitzgerald and Fuentes, Atwood and O'Connor, Sandburg and Cisneros. Immerse yourself in the joy of creativity.

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### Fall

- |      |   |
|------|---|
| 0456 | Southern Women Writers and the Short Story                              |
| 0101 | Spirit of the Land: Regional Artists and Writers Depict the Environment |
| 0208 | From Cathedrals and Courts: Music of the Middle Ages                    |
| 0261 | Black Roots in Photography: Defining the African-American Experience    |
| 0411 | Celebrating the City: Reading and Writing About North America's Cities  |

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### Winter

- |      |  |
|------|--|
| 0265 | Hands-on Adobe Photoshop   |
| 0167 | Creating Ancient Fibers  |
| 0201 | The World of <i>La Bohème</i>  |
| 0197 | Through an Artist's Eye—Taking Some of the Mystery Out of 20th-Century Art |
| 0478 | Fitzgerald and the Jazz Age  |

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### Spring

- |           |  |
|-----------|--|
| 0102      | The Bohemian Life: Art and Artists in 19th-Century Fiction |
| 0105      | Mimbres Pottery: Ancient Art of the American Southwest     |
| 0108      | The Weisman Art Museum: History, Architecture, and Culture |
| 0450-0453 | Minnesota Writers Series                                   |
| 0213      | The Beatles: Their History, Their Music                    |





## Social Sciences, Public Issues, and Humanities

Learn more about yourself and others through classes in psychology or anthropology; examine questions about the meaning of life in philosophy classes; explore the significance of social and governmental policies and decisions in political science and history classes; discuss the significance of gender across several disciplines through women's studies. Survey a host of issues centering on studies of self and society.

### Fall

- |      |   |
|------|---|
| 0340 | Plants and People: Ethnobotany of the Western Great Lakes |
| 0304 | America's Wars  |
| 0306 | Women and Classical Political Thought                     |
| 0332 | In the Land Between Heartbeats: Stories of Descent        |
| 0390 | Whose Body Is It Anyway? Ethics in Medicine               |

### Winter

- |      |                                     |
|------|-------------------------------------|
| 0348 | Rise of Civilization: The New World |
| 0358 | Ancient Mysteries of the Bible      |
| 0346 | What is an Archaeology Lab?         |

### Spring

- |      |  |
|------|--|
| 0301 | Merry Medieval Life in Britain, Ireland, and Scandinavia                       |
| 0302 | American Civil Liberties: History and Recent Court Decisions                   |
| 0392 | Can I Make a Difference? Gaining Public Access to Governmental Decision Making |



## Natural and Physical Sciences

Gain greater understanding of yourself as a biological organism and examine your place in the web of life. Derive satisfaction and joy from observing the underlying order and beauty of the natural world and wonder at the scientific discoveries and unanswered questions about the universe. Courses in this category include popular natural history classes (many at the Bell Museum and the Minnesota Zoo); courses examining the social and political implications of scientific progress; and courses in physics, biology, and astronomy.

### Fall

- |      |   |
|------|---|
| 0522 | Conservation of Asian Tigers: The Biology and the Politics  |
| 0587 | Asian Medicine: Alternative Ways of Knowing   |
| 0580 | Black Rhinos, Rosy Periwinkles, and Minnesota Trout Lilies: Understanding Endangered Species Issues |
| 0560 | Quarks to Quasars: Overview of 20th-Century Physics   |

### Winter

- |      |  |
|------|--|
| 0500 | Biodiversity: What Is It and Why Is It Important?                |
| 0540 | Brain and Mind   |
| 0528 | Eagles: Their Natural History and Place as Cultural Icon         |
| 0802 | The Beginning and End of the Universe (Compleat Scholar Weekend) |

### Spring

- |      |  |
|------|--|
| 0563 | An Introduction to the Magnificent World of Molecules                          |
| 0570 | The Science of Chaos: A New Window on Both the Ordinary and the Fantastic      |
| 0585 | Resurgence of an Old Enemy: Understanding New and Emerging Infectious Diseases |
| 0583 | Science or Pseudoscience? Examining the Difference                             |

# PRACTICAL

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## SCHOLAR

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- *Academic and Career Skills*
- *Communication and Language*
- *Human Development and Relationships*
- *Financial/Consumer Issues and Health*
- *Gardening and Landscaping*

Interested in gardening? Need help getting your finances in order? Concerned about your health and physical fitness? Enhance existing talents and develop new skills for problem solving as you learn from the research and teaching expertise of University faculty and local professionals. Exercise your mind and body in these classes offered at convenient times and locations.

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**Fall**

|      |   |
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| 0701 | Layout and Page Design for Desktop Publishing |
| 0616 | Test-Taking Strategies                        |
| 0671 | Discovery Writing: Creating a Future          |
| 0744 | Overview of Sign Language and Deaf Culture    |

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**Winter**

|      |  |
|------|--|
| 0723 | Discover the Internet  |
| 0983 | Pruning Trees and Shrubs                                       |
| 0920 | The Informed Consumer: Understanding Labels, Warnings, Hazards |

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**Spring**

|      |  |
|------|--|
| 0615 | Surviving as a Student: Managing Multiple Priorities           |
| 0651 | Basic Math: Concepts and Skills for Work or Future Course Work |
| 0670 | Opportunities in the Human Services: Careers for the Future    |
| 0954 | Across the Seasons: Designing Gardens for Year-round Beauty    |

## ART AND ARCHITECTURE

### Art History/Appreciation

**CSch 0100 ART AND PROVOCATION—1995.** No credit, \$70 plus \$3 course fee. Total \$73 (age 62 and WAC members, \$63 plus \$3 course fee. Total \$66).

Concurrent with the Walker Art Center's fall exhibition "Brilliant' New Art From London," this class explores the art and milieu of a group of London-based artists—young, radical, self-promotional, theatrical, and street oriented. Their works traverse and reconfigure visual conventions and art-historical precedents and expectations. Diverse pieces by this community of artists, including Glen Brown, Gillian Waring, Damien Hearst, and Sarah Lucas, derive from the manipulation of a 1960s pop art heritage through a post-Thatcherite sensibility that nods to the machinations of situationists and punks alike. Slide lectures place the work from the Walker show into social and cultural context, analyze British subcultural roots (in fashion, print, and music as well as imagery), and consider similar attempts being made elsewhere, particularly by Twin Cities' artists. (Offered in cooperation with the Walker Art Center. Both WAC and Compleat Scholar will accept registrations. Limited to a combined total of 40)

Fall Spec Term, ★Sec 1, Th, 6-8, Oct. 26-Nov.

16 (4 meetings), Walker Art Center, Lecture Room, Vineland Pl., Mpls. *No late fee through Oct. 19.*

*(Lisa Fischman is a doctoral candidate in art history at the University of Minnesota. Her research focus is 20th-century American popular material culture, and her dissertation deals with the Disney Davy Crockett craze of the 1950s)*

**CSch 0101 THE SPIRIT OF THE LAND: REGIONAL ARTISTS AND WRITERS DEPICT THE ENVIRONMENT.** No credit, \$105 plus \$3 course fee. Total \$108 (age 62, \$94.50 plus \$3 course fee. Total \$97.50).

An enduring theme in American landscape art and literature is the human relationship to space and place. Begin a regional exploration of landscape art and writing with work from the American West, and then explore the landscapes of other parts of the United States. Our notions about the land are strongly influenced by images and words of 19th- and 20th-century painters, poets, sculptors, writers, philosophers, and scientists, who in turn have influenced and inspired each other. What is your relationship with the American landscape? How have your interactions with nature affected your spirituality, phi-

losophy, or cosmology? Using slide lectures and discussion, as well as your personal responses to landscape in journal writing, sketches, photography, or other creative ways of documenting your experiences, examine and share the multifaceted human experience with the land. Includes one session at the Weisman Art Museum. (Limited to 25)

Fall Spec Term, ★Sec 1, W, 6:30-8:30, Sept. 27-Nov. 1 (6 meetings), Arch 20. *No late fee through Sept. 20.*

*(Wendy Lane is a landscape artist and M.F.A. candidate in painting at the Minneapolis College of Art and Design [MCAD]. She has taught drawing classes at MCAD, exhibited at the Minnesota Valley Wildlife Refuge, and served as an artist-in-residence at Yellowstone National Park during summer 1993)*

**CSch 0102 THE BOHEMIAN LIFE: ART AND ARTISTS IN 19TH CENTURY FICTION.** No credit, \$88 plus \$3 course fee. Total \$91 (age 62 and MIA members, \$79.20 plus \$3 course fee. Total \$82.20).

Artists often ignore life's normal restraints, we tend to believe, at best merrily flouting conventions, at worst driving themselves to despair and suicide. Explore the modern idea of the bohemian in selected 19th-century fiction by Honore de Balzac, George DuMaurier, Emile Zola, and Anne Brontë. Examine artistic life—traditions of the old masters in Paris studios, adventures of English students lodged in the Latin Quarter, crises among revolutionary groups such as the impressionists, and also, in contrast, the quieter achievements of women artists who often lived apart from these recognized circles. Slide lectures about works by such artists as Frith, Millais, Manet, and Whistler contrast the genteel world of Victorian art with the revolutionary ferment of art in France. Texts include *Tribby* by DuMaurier and *His Masterpiece* by Zola. (Offered in cooperation with the Minneapolis Institute of Arts. Both MIA and Compleat Scholar will accept registrations. Limited to a combined total of 40)

Spring Spec Term, ★Sec 1, Th, 6-8, Apr. 11-May 9 (5 meetings), Mpls Institute of Arts, Whittier Room, 2400 S. 3rd Ave. *No late fee through Apr. 4.*

*(Julie L'Enfant completed an M.A. in art history and a Ph.D. in English at Louisiana State University. Currently completing a doctorate in art history at the University of Minnesota, her area of concentration is the modern period, especially 19th-century British art. Her master's thesis focused on Victorian landscape watercolors)*

## Noncredit Courses

**CSch 0103 ART AFTER MODERNISM.** No credit, \$70 plus \$3 course fee. Total \$73 (age 62 and WAC members, \$63 plus \$3 course fee. Total \$66). The Twin Cities offers numerous venues for viewing contemporary art—museums, schools, and various small galleries are scattered throughout the area. Through an examination of major themes and artists of the last 25 years, expand your understanding of the issues and concerns that motivate contemporary art. Surveying ideas and movements after modernism, learn how new ways of thinking affected artists like Cindy Sherman, Jenny Holzer, Hans Haacke, Edgar Heap of Birds, Krzysztof Wodiczko, Christo, Mary Kelly, and Adrian Piper. Drawing from the Walker Art Center's permanent collection, explore the following issues: cultural relativism; the influence of postmodern and feminist theory; the "death of painting"; the critique of originality; the blurring of artist and critic; performance and installation art; identity in art (ethnic and sexual); and the politics of art. (Offered in cooperation with the Walker Art Center. Both WAC and Compleat Scholar will accept registrations. Limited to a combined total of 40)

Spring Spec Term, ★Sec 1, Th, 6-8, May 16-June 6 (4 meetings), Walker Art Center, Lecture Room, Vineland Pl., Mpls. *No late fee through May 9.*

*(Diane Mullin is a doctoral candidate in art history at Washington University. Her research focus is post-World War II art, with extensive research in feminist art history and theory. Her dissertation topic is "From Tragedy to Travesty: The Generation of a New American Art in the Early 1950s")*

**CSch 0104 JACOB LAWRENCE: AMERICAN PAINTER AND PRINTMAKER.** No credit, \$54 (age 62 and Weisman members, \$48.60).

Held in conjunction with the Weisman Art Museum exhibition "Jacob Lawrence: Thirty Years of Prints (1963-1993)," Jan. 12-Mar. 17, this three-part course examines the prints and paintings of African-American artist Jacob Lawrence. Throughout his career, Lawrence has consistently and effectively portrayed, in visual terms, the black experience in America, perhaps more than any other artist of his generation. At the same time, his work speaks to freedom and social justice for all people throughout the world. This course explores Lawrence's connection to the Harlem Renaissance, his early career, as well as his mature works. His numerous print series is highlighted throughout the class. (Offered in cooperation with Frederick R. Weisman Art Museum. Limited to 25)

Winter Spec Term, ★Sec 1, W, 6-8, Jan. 17-31 (3 meetings), WeismanArt, Billy & Jody Weisman Family Seminar Room. *No late fee through Jan. 10.*

*(Jacqueline Copeland is an art historian and assistant education director at the Walker Art Center. She has taught numerous classes on modern and contemporary art)*

**CSch 0105 MIMBRES POTTERY: ANCIENT ART OF THE AMERICAN SOUTHWEST.** No credit, \$54 (age 62 and Weisman members, \$48.60). Journey back to the early pre-contact period of southwest American Indian culture. In conjunction with a special exhibition at the Frederick R. Weisman Art Museum, focus on the unique pottery of the Mimbres culture flourishing from the 2nd to the 13th centuries. Learn more about the significance of Mimbres symbols and imagery, and about the materials, techniques, styles, and influences of other concurrent cultures. (Offered in cooperation with the Frederick R. Weisman Art Museum. Limited to 30)

Spring Spec Term, ★Sec 1, W, 6-8, Apr. 3-17 (3 meetings), WeismanArt, Billy & Jody Weisman Family Seminar Room. *No late fee through Mar. 27.*

*(Ron Libertus is a lecturer in the Department of American Indian Studies at the University of Minnesota. He has lectured and written about ancient southwest American Indian culture)*

**CSch 0106 POINT ZERO AND BEYOND: EUROPEAN ART AFTER WORLD WAR II.** No credit, \$70 plus \$3 course fee. Total \$73 (age 62 and WAC members, \$63 plus \$3 course fee. Total \$66).

The year 1945 marked a significant change in European culture and history. With Germany's defeat, Europe suddenly faced the task of rebuilding itself following years of war, chaos, and ideological turmoil. Like other aspects of society, the arts were hard hit. Many of Germany's most promising artists had been labeled degenerate, persecuted in their homeland, or forced into exile by the Nazi regime. Other European artists willingly escaped the constraints of a tradition-bound society by emigrating to the United States and especially New York City, which became the new capital of modern art. But what happened in the old capitals of modern art—Paris, Berlin, London—now that Europe was free from war? How did European artists deal with the issues that divided abstract from figurative art, and what were the products of their new concept of "modern"? Beginning with 1945, point zero of a new artistic era, consider movements like art informel, COBRA, and fluxus, as well as works by artists and sculptors such as Jean Dubuffet, Alberto Giacometti, Yves Klein, and Joseph Beuys. (Offered in cooperation with the Walker Art Center. Both WAC and Compleat Scholar will accept registrations. Limited to a combined total of 40)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

Spring Spec Term, ★Sec 1, Th, 6-8, Apr. 11-May 2 (4 meetings), Walker Art Center, Lecture Room, Vineland Pl., Mpls. *No late fee through Apr. 4.*

*(Kristin Makhholm is a doctoral candidate in art history at the University of Minnesota, where her focus is 20th-century art. Her dissertation topic deals with representations of women in Germany in the 1920s)*

**CSch 0107 SOMEWHERE UNDER THE RAINBOW: MULTICULTURAL ART IN AMERICA.** No credit, \$70 (age 62, \$63).

Contemporary African American, Asian American, Latino/Latina, and Native American artists offer diverse and sometimes breathtaking, but often overlooked, glimpses into our multicultural society. Bring a bag lunch and join an opportunity to look under the American rainbow at art ranging from beadwork and quilts to painting and sculpture. How are American artists of color using their art to define and invent themselves in an America that has offered them few role models and many negative stereotypes? How are they addressing their communities? How are they grappling with marginalization or exclusion from the dominant art world? How are they attempting to promote cross-cultural understanding? This course complements slide lectures and discussions with visits from local artists of color and brief works by American writers of color. (Limited to 24)

Fall Spec Term, ★Sec 1, Th, 12-2, Oct. 5-26 (4 meetings), Ronald M. Hubbs Center for Lifelong Learning, 1030 University Ave., StP. *No late fee through Sept. 28.*

*(Andrea Gilats has served as director of the University of Minnesota's Split Rock Arts Program for the past 11 years. Split Rock, a summer series of residential arts workshops, is nationally noted for its culturally diverse faculty and curriculum. A doctoral student at The Union Institute, Gilats's dissertation is on the art of living women beadworkers of selected Great Plains Indian reservations)*

**CSch 0108 THE WEISMAN ART MUSEUM: HISTORY, ARCHITECTURE, AND CULTURE.** No credit, \$85 (age 62 and Weisman members, \$76.50).

Examine the Frederick R. Weisman Art Museum from a variety of perspectives, including its design and building history, its place in the work of architect Frank O. Gehry, and its place in the history of museums. Gehry's work has precipitated extensive debates over "high" versus "low" art, as well as broader discussion about innovation versus tradition in society. At the same time, the place of the

museum in society has become increasingly controversial: concerns have been raised regarding its role in the valuation and very definition of culture and society. Explore how this new building engages these and other issues in our local culture as well as in broader international and historical contexts. (Offered in cooperation with the Frederick R. Weisman Art Museum. Limited to 50)

Spring Spec Term, ★Sec 1, T, 6-8, Apr. 23-May 14 (4 meetings), WeismanArt, William G. Shepherd Room. *No late fee through Apr. 16.*

*(John Archer, architectural historian, is an associate professor of cultural studies at the University of Minnesota. He has done extensive research and writing on British and American architectural history and theory, and urban and suburban history. Lyndel King is the executive director of the Weisman Museum. She completed her master's and doctorate degrees in art history at the University of Minnesota. John Cook, of the firm Meyer, Sherer, and Rockcastle (MSR), served as project architect on the Weisman Museum in collaboration with Frank Gehry and Associates. At MSR for 12 years, he has worked on a variety of projects, from residential dwellings to large corporate complexes)*

**CSch 0110 VENETIAN MASTERS: THREE CENTURIES OF NORTHERN ITALIAN PAINTING.** No credit, \$54 plus \$3 course fee. Total \$57 (age 62 and MIA members, \$48.60 plus \$3 course fee. Total \$51.60).

Focusing on the unique contributions of Venetian painting to Italian Renaissance art, this class is offered in conjunction with the "Treasures of Venice: Paintings from the Museum of Fine Arts, Budapest" exhibit held at the Minneapolis Institute of Arts (Oct. 22, 1995-Jan. 14, 1996). The exhibit features 55 paintings from the renowned Budapest collection, one of the largest collections of Venetian paintings outside Venice. This class pays particular attention to developments in the use of color, depiction of light, and liberation of brush work in the paintings of such masters as Titian, Gentile Bellini, Bellotto, Giorgione, Sebastiano, Ricci, G. B. Tiepolo, Tintoretto, and Paolo Veronese. (Offered in cooperation with the Minneapolis Institute of Arts. Both MIA and Compleat Scholar will accept registrations. Limited to a combined total of 60)

Fall Spec Term, ★Sec 1, W, 1-3, Nov. 1-15 (3 meetings), Mpls Institute of Arts, Auditorium, 2400 S. 3rd Ave. *No late fee through Oct. 25.*

*(Robert Gambone is chair of the Department of Art and Art History at the College of St. Catherine. He completed his doctorate in art history at the University of Minnesota and has published books, catalogs, and reviews in the field)*

## Noncredit Courses

**CSch 0112 PLEASE BE SEATED: THE SOCIAL HISTORY OF THE CHAIR.** No credit, \$44 (age 62, \$39.60).

Take an amusing, slightly academic romp through the history of seating. Examine the meanings of the chair as power, authority, and cultural icon from the Renaissance to the present. From the Brewster chair, to the tete-a-tete, to the conversation pit, the chair reveals much about its designers and users, its relation to status, style, dress, posture, and the battle of the sexes. (Limited to 40)

Spring Spec Term, ★Sec 1, W, 6:30-8:30, Apr. 10, 17 (2 meetings), McNH 33, StP Campus.

*No late fee through Apr. 3.*

*(Timothy Blade is professor of design and curator of decorative arts for the Goldstein Gallery at the University of Minnesota. He has authored numerous publications on the meanings of material culture, and has been a frequent guest on radio programs regarding the decorative arts)*

**CSch 0114 LANDSCAPE ART: A BRIEF HISTORY.** No credit, \$90 plus \$3 course fee. Total \$93 (age 62, \$81 plus \$3 course fee. Total \$84).

Why do we like to look at landscapes? Discover the wide variety of ideas and emotions such paintings convey by surveying landscape art of Western culture from its origins in ancient Rome. Following a review of the 17th-century ideal landscape as developed by Claude Lorraine and Nicholas Poussin, examine the picturesque, focusing on natural beauty in works by Gainsborough and others. Next, look at romantic landscapes by artists like Turner and Constable which show a reverence for nature derived from the romantic poets such as Wordsworth. Then address the realists, who like the pre-Raphaelites, French realists, and impressionists, sought to represent the objective truth. And finally conclude with works of the expressionists, like Van Gogh and Anselm Kiefer, who used the landscape to express their innermost feelings and sensations. Slide lectures are augmented by a packet of selected readings, including poetry, diaries, letters, and aesthetic theory. (Limited to 30)

Winter Spec Term, ★Sec 1, Th, 6:30-8:30, Feb. 1-29 (5 meetings), JonesH 207A. *No late fee through Jan. 25.*

*(Julie L'Enfant completed an M.A. in art history and a Ph.D. in English at Louisiana State University. Currently completing a doctorate in art history at the University of Minnesota, her area of concentration is the modern period, especially 19th-century British art. Her master's thesis focused on Victorian landscape watercolors)*

## Studio Arts

**CSch 0140 CREATIVE DRAWING.** No credit, \$91 (age 62, \$81.90).

Learn to use the creative part of your mind and to apply the principles of design to the art of drawing. Using natural surroundings as subjects, tap your imaginative energy to produce line drawings with pencil, pen and ink, and charcoal. Learn the fundamentals of drawing and illustration for printing reproduction. Open to all levels of drawing skill. (Limited to 25)

Fall Spec Term, ★Sec 1, Th, 10:15 a.m.-12:15, Oct. 12-Nov. 16 (6 meetings), Gloria Dei

Lutheran Church, 700 Snelling Ave. S., StP.

*No late fee through Oct. 5.*

*(Mary Kubik is an advanced graduate student in the Department of Design, Housing, and Apparel at the University of Minnesota)*

**CSch 0141 DRAWING IN COLOR.** No credit, \$91 (age 62, \$81.90).

Enhance your drawing skills through greater understanding of composition and color. Choose from such subject material as still lifes, human or animal forms, plants, flowers, landscapes, or architectural settings. Learn to make color three-dimensional using techniques like chiaroscuro and color blending. Develop a drawing series (two or three works) that satisfies your needs and demonstrates newfound skills. Supply list and syllabus provided at first session. (Limited to 25)

Spring Spec Term, ★Sec 1, T, 10:15 a.m.-12:15, Apr. 2-May 7 (6 meetings), Linden Hills

Library, 3900 W. 43rd St., Mpls. *No late fee through Mar. 26.*

*(See Mary Kubik's biography in CSch 0140)*

**CSch 0142 DRAWING YOUR LIFE—EVERYDAY.** No credit, \$76 (age 62, \$68.40).

Use drawing journals to record the wonder and simple beauty around you—the backyard bird feeder, seasons of the year, remodeling of the kitchen, a visual diary of your children's lives. Use them to record travels or for a relaxing time-out project you give yourself each day. Drawing journals are a nonthreatening, informal art form that uses sketching without the pressure of producing public art. Using basic drawing principles, spend significant time drawing in class and completing creative journal assignments. Includes demonstrations on simple color techniques. (Limited to 20)

Winter Spec Term, ★Sec 1, T, 6:30-8:30, Jan. 9-Feb. 6 (5 meetings), KaufL 302, StP Campus.

*No late fee through Jan. 2.*

*(Kris Kirkeby is a free-lance scientific illustrator. She also teaches natural science drawing to adults and children)*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

**CSch 0144 THE OTHER END OF THE PAINTBRUSH: PAINTING IN OILS AND ACRYLICS.** No credit, \$97 (age 62, \$87.30).

Focus on the enjoyment and technique of painting in oils and acrylics. Make personal ideas artistically satisfying by improving your skills. Class format includes demonstrations, critiques, and discussions, and instruction is varied to benefit the more advanced student as well as the beginner. Bring a sketch pad and pencil to the first meeting, when a more detailed list of required supplies will be given. (Limited to 20)

Fall Spec Term, ★Sec 1, T, 6:30-9, Sept. 26-Oct. 31 (5 meetings—no class Oct. 3), ArtB 151. *No late fee through Sept. 19.*

*(Louis Safer is a professor emeritus of art in the General College at the University of Minnesota. His work has been exhibited internationally and is included in the collection at the Smithsonian Portrait Gallery and the National Gallery in Finland)*

**CSch 0145 THE ART OF PORTRAITURE.** No credit, \$116 (age 62, \$104.40).

Learn the basic steps in portrait painting. Disciplines in drawing, color, rendering, and creative interpretation, among others, are covered to provide a firm foundation for portraiture. Work in oils, acrylics, or pastels. Bring an inexpensive set of pastels and some sheets of newsprint to the first meeting. (Limited to 20)

Spring Spec Term, ★Sec 1, W, 6:30-9, Apr. 3-May 8 (6 meetings), ArtB 161. *No late fee through Mar. 27.*

*(See Louis Safer's biography in CSch 0144)*

**CSch 0146 PAINTING IN WATERCOLOR.** No credit, \$97 (age 62, \$87.30).

The soft pastels of watercolor blend and flow to create a dreamlike image. Discover how textural effects, washes, and color combinations create moods in painting. Learn about the tools you need—paints, papers, brushes—through lectures, slides, and demonstrations of watercolor techniques. Practice these skills in painting sessions. Individual attention encourages creativity, and group critiques help refine skills. Bring art supplies to second session. (Limited to 20)

Fall Spec Term, ★Sec 1, W, 6:30-9, Oct. 11-Nov. 8 (5 meetings), ArtB 140. *No late fee through Oct. 4.*

*(Marija Skutans Netz is an award-winning watercolorist whose paintings appear in local galleries as well as in private and corporate collections. She has taught at the University of Minnesota and is a popular watercolor workshop leader and guest speaker)*

**CSch 0147 WATERCOLOR: IN SEARCH OF A PERSONAL STYLE.** No credit, \$97 (age 62, \$87.30).

Experiment with some of the painting styles of contemporary watercolorists and develop awareness of your inner uniqueness as a source of creativity. This is a studio class; bring art supplies to the first session. Participants should have some experience with watercolor painting. (Limited to 20)

Spring Spec Term, ★Sec 1, T, 1-3:30, Apr. 2-30 (5 meetings), Lutheran Church of the Good Shepherd, 4801 France Ave. S., Edina (park in and enter from south lot). *No late fee through Mar. 26.*

*(See Marija Skutans Netz's biography in CSch 0146)*

**CSch 0152 DESIGN BASICS.** No credit, \$62 (age 62, \$55.80).

"Technology has made precision in multiplication the province of the machine, forcing the essence of human creativity to retreat slowly from the hand to the head," said graphic design theorist Paul Saffo. Understanding the principles of design is becoming increasingly important as each sector of our society converts to using computers. Discover how basic design and communication principles help us make sense of the often chaotic world in which we live. Course includes hands-on projects designed to experiment with design principles such as gestalt theory, design basics, communication theory, and the role technology plays in design aesthetics. (Limited to 15)

Fall Spec Term, ★Sec 1, W, 6:30-8:30, Oct. 11-Nov. 1 (4 meetings), BorH 365, StP Campus. *No late fee through Oct. 4.*

*(Bruce Wright, an advanced graduate student in the Department of Design, Housing and Apparel at the University of Minnesota, has taught design at the Minneapolis College of Art and Design and the College of Associated Arts in St. Paul. Also a licensed architect, he studied art and architecture history at the Institute d'Art in Aix-en-Provence, France)*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

## Noncredit Courses

### **CSch 0158 BEADWORK AS CONTEMPORARY ART.** No credit, \$116 (age 62, \$104.40).

Are you intrigued by the endless possibilities of using beads as self-expression? Are you fascinated by the color, light reflection and refraction, and texture of seed beads? This hands-on workshop explores numerous traditional and nontraditional beadwork techniques to help you develop a unique expressive style. Using mostly seed beads and some bugle and larger beads, discover off-loom needleweaving, bead appliqué on fabric, dimensional and surface embellishment, and attaching stones, photos, and found objects with beads. Learn to combine processes to make beadwork collages, jewelry, beaded clothing, or nonfunctional sculptural pieces. Remember to bring your imagination! Materials list provided prior to first class. Supplies will cost about \$15. (Limited to 15)

Spring Spec Term, ★Sec 1, Th, 6:30-9:30, Apr.

11-May 9 (5 meetings), BorH 365, StP

Campus. *No late fee through Apr. 4.*

*(Nancy Eha, a member of the Upper Midwest Bead Society, has exhibited her beadwork at national juried shows and has taught beadworking in several Twin Cities locations)*

### **CSch 0163 COMBINING THE ARTS OF JAPAN: A HAIKU AND PAPERMAKING WORKSHOP.** No credit, \$116 (age 62, \$104.40).

Ancient Japan was known for its traditional arts of poetry and papermaking. Discover these and other traditional Japanese arts in this Saturday workshop. Spend class time writing haiku as well as making paper that will become the pages of a beautiful hand-bound book. Learn simple bookbinding techniques and block printing for illustrating some of the "poem pages" of your book. Share your completed work with classmates on the last day. (Limited to 15)

Fall Spec Term, ★Sec 1, Sa, 2:30-5, Sept. 23-

Oct. 14 (4 meetings), White Wings Papermaking Studio, 3544 Grand Ave S., Mpls. *No late fee through Sept. 15.*

*(Elizabeth Kilde Fischer is a literary artist and published writer who has taught poetry at the University of Minnesota, where she earned an M.A. in English and creative writing. Jennifer Kunin is a papermaker and co-founder of White Wings Hand Papermaking Studio. She earned her B.F.A. from the Minneapolis College of Art and Design and has traveled extensively to research papermaking)*

### **CSch 0167 CREATING ANCIENT FIBERS.** No credit, \$116 plus \$15 special fee. Total \$131 (age 62, \$104.40 plus \$15 special fee. Total \$119.40).

Discover how the fibers of wool, cotton, linen, and silk were used by ancient cultures. Learn the historical background on preparation and uses of the "fiber of the week" through illustrated lectures and spinning demonstrations. Make cloth from each fiber by creating simple weaving devices such as a warp-weighted loom for wool weaving, a simple frame for sprang twining with linen, and a twig loom for weaving with cotton. Gain an understanding of preparation and spinning, and four types of simple weaving. (Limited to 16)

Winter Spec Term, ★Sec 1, T, 6:30-8:30, Jan. 9-

Feb. 13 (6 meetings), HckrH 210, StP Campus.

*No late fee through Jan. 2.*

*(Karen Searle, artist and instructor in textile arts, is the editor/publisher of Dos Tejedoras Fiber Arts Publications. Her work has been shown internationally, in national juried art exhibitions, and the Minnesota State Fair. For the last two years she has also served as a mentor for WARM in their mentor-protégée program)*

## Architecture

### **CSch 0175 HELPING TO DESIGN YOUR HOME: USING COMPUTERS FOR VISUALIZING.** No credit, \$73 (age 62, \$65.70).

Experience part of the architectural process used in home design by learning how architects use computers to visualize and communicate their designs in two and three dimensions. Try these computer techniques on your own design ideas with easy-to-use software for the layperson. Discuss issues involved in residential design and in working with architects and contractors to make ideas and plans a reality. This class, held in the College of Architecture and Landscape Architecture computer lab, provides demonstrations and hands-on tutorials. Participants should be familiar with Macintosh computers or Windows, and must either pay a software rental fee (\$10) or purchase the software (\$30-\$50). (Limited to 12)

Fall Spec Term, ★Sec 1, T, 6:30-8:30, Oct. 10-31 (4 meetings), Arch 145. *No late fee through Oct. 3.*

Spring Spec Term, ★Sec 2, T, 6:30-8:30, Apr. 2-23 (4 meetings), Arch 145. *No late fee through Mar. 26.*

*(Lars Peterssen is an architect and a lecturer in the College of Architecture and Landscape Architecture at the University of Minnesota. He teaches architectural design and computer-aided design courses, and serves as a consultant to architectural firms)*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.



**CSch 0176 THE POWER OF LIGHT: GLASS ART IN ARCHITECTURE.** No credit, \$70 (age 62, \$63).

Explore the use and aesthetics of contemporary glasswork and its historical precedents in applied arts and architecture. Learn about the unique ability of glasswork to transcend image through the animating power of light, and discover ways to integrate it into residential, corporate, religious, and public spaces. Understand how various types of glass—translucent, dichroic, beveled, and prismatic—change the way light comes through a plane. Witness how glasswork interacts with and engages the viewer through the manipulation of light and color, and experience the ability of glasswork to mark time and seasons and even regional differences. Includes a tour of Pegasus Studio, 5155 Bloomington Ave., Mpls (Saturday, 10 a.m.-12, Jan. 27). (Limited to 20)

Winter Spec Term, ★Sec 1, Th, 6:30-8:30, Jan.

11-Feb. 1 (3 meetings plus studio tour—no class Jan. 25), Arch 20. *No late fee through Jan. 4.*

*(Michaela Mahady is an architect with Mulfinger, Susanka, and Mahady Architects, a firm specializing in residential architecture. John Pietras has been an artist working with stained glass for 20 years. Through Pegasus Studio, Inc., Mahady and Pietras produce a variety of commissioned pieces for architectural settings of all scales)*

**CSch 0177 THE ARCHITECTURE OF FRANK LLOYD WRIGHT.** No credit, \$90 (age 62, \$81).

Discover the genius of Frank Lloyd Wright through consideration of his seven decades of architectural production. Five slide lectures explore Wright's architectural influences—the revolutionary prairie school dwellings, his impact on European modernism, the concept of an "organic" architecture, his "second" career featuring modest houses for the middle class, and the legacy of his work. Discussions and lectures focus on particular themes in Wright's work, illustrated through his more renowned landmarks. (Limited to 30)

Spring Spec Term, ★Sec 1, M, 6:30-8:30, Mar.

25-Apr. 22 (5 meetings), Arch 60. *No late fee through Mar. 18.*

*(Timothy Quigley is an architect specializing in residential architecture and an adjunct professor in architecture at the University of Minnesota)*

**CSch 0178 DISTINCTIVE TWIN CITIES RELIGIOUS ARCHITECTURE.** No credit, \$72 (age 62, \$64.80).

Religious buildings—churches, temples, mosques—are among any society's finest architectural legacies. This is certainly true of the Twin Cities, where religious architecture of a particularly high quality and remarkable variety has been the norm for more than 125 years. Through slide lectures and discussion, investigate some of the more architecturally significant buildings in St. Paul and Minneapolis—from simple to grand, from old to new—and gain new insights into these interesting urban structures. (Limited to 30)

Fall Spec Term, ★Sec 1, Th, 6:30-8:30, Oct. 5-26 (4 meetings), Arch 15. *No late fee through Sept. 28.*

*(Craig Rafferty taught design classes in architecture at the University of Minnesota for 14 years. He is currently an architect with Rafferty, Rafferty, and Tollefson, a St. Paul-based firm noted for its religious architecture design)*

**CSch 0179 THE AMERICAN HOUSE: CHANGE AND COMMUNITY.** No credit, \$98 (age 62, \$88.20).

The concept of the ideal house has evolved over time in response to many issues, both societal and technological. Explore the history of the American house and the changing relationship between values and housing. Discover how these ideal houses form connections within communities and how assumptions underlying housing standards of the past have affected the fabric of the city. Analyze how we shape our houses today, and how they in turn shape us and the communities in which we live. Includes lectures, group discussion, tours of regional homes from various eras, and a hands-on session to design one's own ideal home.

Winter Spec Term, Sec 1, W, 6:30-8:30, Jan. 10-

Feb. 14 (6 meetings), Arch 60. *No late fee through Jan. 3.*

*(Jean Larson and Laurel Ulland both earned degrees in architecture from the University of Minnesota. Employees of Mulfinger, Susanka, and Mahady Architects, Inc., a firm that specializes in residential architecture, Ms. Larson was a 1993 recipient of the AIA Henry Adams Award for top-ranked architecture students and Ms. Ulland has 10 years' experience in historic restoration projects)*

Miscellaneous

**CSch 0195 CONSERVATION OF PAINTINGS: MATERIALS, PROCESS, AND PRIORITIES.**

No credit, \$54 (age 62 and MIA members, \$48.60).

This course offers an introductory understanding of what is involved in the conservation of paintings—the basics about painting materials, different levels and types of treatments, the care and handling of paintings, and knowing what to look for in a conservation professional. Session one provides an anatomy of painting, a look at the construction of traditional and contemporary paintings on fabric and solid supports. The second session deals with the laboratory examination and treatment of paintings, the causes and treatments of deterioration and possible solutions including structural and cosmetic interventions. Also discussed is the American Institute of Conservation ethical code, designed to govern the practice of conservation. The final class examines priorities and procedures in the care, handling, and framing of paintings. One session takes place in the laboratory where you can view equipment, tools, and works-in-progress. (Offered in cooperation with the Minneapolis Institute of Arts and Upper Midwest Conservation Association. Both MIA and Compleat Scholar will accept registrations. Limited to a combined total of 20)

Winter Spec Term, ★Sec 1, Th, 3-5, Feb. 15, 29, and 6-8, Feb. 22 (3 meetings), Mpls Institute of Arts, Whittier Room, 2400 S. 3rd Ave. *No late fee through Feb. 8.*

*(David Marquis completed an M.F.A. at the University of Minnesota. He worked actively as an artist for 10 years before becoming a conservation intern. He completed a two-year NEA internship and a three-year paintings conservation apprenticeship at the Upper Midwest Conservation Association, where he is currently working on paintings from museums and private collections)*

**CSch 0196 AN ARTIST'S LIFE.** No credit, \$58 (age 62 and Weisman members, \$52.20).

How do artists live, especially in a society that does not always value their roles and contributions? How do they sustain themselves both economically and creatively? What processes do they use to stimulate their ideas? What role does feedback and critical commentary play in that process? How does the correlation of self-evaluation and critical review from professional critics and spectators influence the direction of their work? Explore these and other questions through discussions with a variety of visual artists from the University of Minnesota art faculty and the Twin Cities community. If you're an

artist or former art student, you will hear issues about artistic life seldom discussed in class, and if you're an arts viewer and collector, you will gain new understanding about the process and commitment required in choosing this work. (Offered in cooperation with Frederick R. Weisman Art Museum. Limited to 35)

Fall Spec Term, ★Sec 1, W, 6-8, Oct. 18-Nov. 1 (3 meetings), WeismanArt, Billy & Jody Weisman Family Seminar Room. *No late fee through Oct. 11.*

*(Moderator: Bienvenida "Beni" Matias is the executive director of the Center for Arts Criticism in St. Paul. Panelists: Rafala Green [Oct. 18] is a sculptor, community activist, and educator who is currently working on the Phillips Gateway Project in Minneapolis. She is concerned not only with expressing her own artistic voice, but in involving nonartists in the creative process. Clarence Morgan [Oct. 18], professor of art at the University of Minnesota, is a painter whose semi-abstract work has been exhibited throughout the United States. He has frequently served as juror and panelist, and has written several articles and reviews. Wayne Potratz [Oct. 25], professor and chair of the Department of Art at the University, is a sculptor who works with cast metal. His work has been exhibited locally, regionally, and nationally; Doug Argue [Oct. 25] is a painter whose artistic accomplishments have been recognized and awarded by the Jerome Foundation, Bush Foundation, National Endowment for the Arts, and Minnesota State Arts Board. His work has been shown throughout the region and featured in exhibitions at the Minneapolis Institute of Arts, Walker Art Center, and the New Museum in New York; Amy Cordova [Oct. 25] is a visual artist, community activist, and author. Her painting and community collaborations have been exhibited in the United States and Canada. She is currently writing and illustrating a children's book, and designing art window glass for the St. Paul Civic Center renovation; Robert Desjarlait [Nov. 1] is an Ojibwe painter and muralist from Red Lake, Minn., as well as a nonfiction writer and traditional dancer. His work has been exhibited locally and nationally; Vince Leo [Nov. 1] is an art critic, photographer, and associate editor of Artpaper. He has taught at the Minneapolis College of Art and Design, Film in the Cities, and the American Photography Institute in New York; Joyce Lyon [Nov. 1], associate professor of art at the University, is a painter interested in image and text, and a founding member of WARM. She has also served on the board of directors of Artpaper)*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

**CSch 0197 THROUGH AN ARTIST'S EYE: TAKING SOME OF THE MYSTERY OUT OF 20TH-CENTURY ART.** No credit, \$70 (age 62, \$63).

Do you like some modern art, but occasionally feel intimidated by it or that you don't quite understand it? The vast scope of art today can make you feel uncertain or uncomfortable, particularly when viewing it in museums and galleries. Inform and enrich your aesthetic understanding of 20th-century art through the eyes of a practicing artist who serves as instructor and guide rather than arbiter. Discuss how artists have made art and why, the media they have used, and their language of shape, form, and color. Through slide lectures and discussions, view modern art and compare it with art made in other times and places. Last class session will meet at the Frederick R. Weisman Art Museum (Billy & Jody Weisman Family Seminar Room, 6-8 p.m.) to view art as a framework for discussing what you understand and think about 20th-century art. (Limited to 22)

Winter Spec Term, ★Sec 1, Th, 6:30-8:30, Feb. 1-22 (4 meetings), KoltH S140. *No late fee through Jan. 25.*

*(Brenda Litman is a practicing artist who received her M.F.A. with a minor in art history from the University of Minnesota. Focusing on abstract art, she has exhibited her work regionally)*

**CSch 0198 BEHIND-THE-SCENES AT MUSEUMS.** No credit, \$88 (age 62, \$79.20).

Have you ever wondered what happens behind-the-scenes at a museum? Each week meet at a different museum in the Twin Cities and receive a behind-the-scenes tour led by museum staff. Gain an understanding of the operation of various museum departments, including administration, curatorship, education, exhibit design, and visitor studies. Explore the history and philosophy of different museums, including the Science Museum of Minnesota, Minneapolis Institute of Arts, and the Minnesota Historical Society History Center. **The first class meets in the foyer of the American Swedish Institute.** List of other museum site visits will be distributed at the first class. (Limited to 20)

Spring Spec Term, ★Sec 1, W, 10 a.m.-12, Apr. 17-May 15 (5 meetings), American Swedish Institute, 2600 Park Ave. S., Mpls. *No late fee through Apr. 10.*

*(Jane Marie Litwak is completing a Ph.D. in educational psychology with a minor in museum studies. She has worked at museums in New York, California, Minnesota, and Europe, and is currently employed at the Minnesota History Center as an exhibit evaluator and audience researcher)*

**CSch 0199 THE MAGIC OF WATER.** No credit, \$54 (age 62 and MMAA members, \$48.60).

"If there is magic on the planet, it is surely contained in water," wrote author Loren Eiseley. What is the magic of water and why has it fascinated artists and scientists, mystics and metaphysicists? In this class held in conjunction with the Minnesota Museum of American Art's "Water: Element and Metaphor" exhibition (Apr. 28-June 30, 1996), explore how water belongs to the realms of secular and sacred, fact and fantasy. Why are there water drums and water prayers? Why do Christians anoint or dip their young in water, or Jews use Mikvahs, or Buddhists visit sacred wells? Why is the act of washing hands often part of rituals? Examine water in daily life as a substance of commerce and waste management, a place for leisure and recreation, a site of inspiration and renewal. Using a variety of media, this exhibition offers a backdrop for you to plunge into a refreshing study of one of Earth's most intriguing elements. (Offered in cooperation with the Minnesota Museum of American Art. Limited to 25)

Spring Spec Term, ★Sec 1, Th, 6:30-8:30, May 2-16 (3 meetings), Minnesota Museum of American Art, Room 223, Landmark Center, 5th at Market, StP. *No late fee through Apr. 25.*

*(Betsy Damon is an internationally recognized artist whose work focuses on water. She is guest curator for "Water: Element and Metaphor," and is currently working on a project that brings together the arts and sciences around water issues on the upper Yangtze River in China)*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

## MUSIC, THEATRE, AND PHOTOGRAPHY

### Music

**CSch 0200 DISCOVERING OPERA.** No credit, \$52 (age 62, \$46.80).

Opera is one of the fastest growing art forms in America today. Explore some of the features of this exciting art in this three-session course. Learn about the role costumes play in establishing character, time, and place. Review the history of various operatic forms and acknowledge the people who make opera happen. Designed for beginners and seasoned opera lovers alike.

Fall Spec Term, Sec 1, T, 6:30-8:30, Oct. 10-24  
(3 meetings), FergH 205. *No late fee through Oct. 3.*

*(Stephen Houtz is a Twin Cities-based composer, pianist, and vocal coach. He has worked with opera companies throughout the Midwest and Southwest, including the Santa Fe Opera, Houston Grand Opera, San Diego Opera, and Minnesota Opera. He is a 1995 recipient of a fellowship grant from the Minnesota State Arts Board to compose opera)*

**CSch 0201 MINNESOTA OPERA: THE WORLD OF LA BOHÈME.** No credit, \$70 (age 62, \$63).

Celebrate the 100th birthday of this beloved opera by learning more about it. Discover the story, the music, and the culture in which it was written through discussion and musical excerpts. Giacomo Puccini, creator of *La Bohème*, was a consummate composer for the theatre. Learn how he set the standards for theatrical and cinematic musical storytelling that are still in use today. Tuition does not include ticket to Minnesota Opera production.

Winter Spec Term, Sec 1, Th, 6:30-8:30, Jan. 4-  
Feb. 1 (4 meetings—no class Jan. 25), FergH  
205. *No late fee through Dec. 28.*

*(See Stephen Houtz's biography in CSch 0200)*

**CSch 0202 FROM ORFEO TO GHOSTS OF VERSAILLES: 400 YEARS OF OPERA.** No credit, \$87 (age 62, \$78.30).

Opera has one of the fastest growing audiences in America today. More and more, people are discovering this extravagant and powerful art form. But where did it start? How did it start? And for whom was it originally created? Survey the 400-year cultural history of opera to answer these questions and more. A class for the beginner and the seasoned operagoer alike.

Spring Spec Term, Sec 1, Th, 6:30-8:30, Mar. 28-  
Apr. 25 (5 meetings), FergH 203. *No late fee through Mar. 21.*

*(See Stephen Houtz's biography in CSch 0200)*

**CSch 0203 FUNDAMENTALS OF MUSIC.** No credit, \$100 (age 62, \$90).

Become acquainted with major styles of Western music, learning to recognize organizing principles from small details through whole genres. Study pieces that are representative of a variety of forms, historical styles, media, and social functions through lectures, demonstrations, class discussion, and recorded music. The course focuses on the classical music traditions from the baroque to the present, but includes excursions into music from other times, places, and traditions. No previous musical experience is required.

Spring Spec Term, Sec 1, Th, 6:30-8:30, Apr. 11-  
May 16 (6 meetings), FergH 205. *No late fee through Apr. 4.*

*(Sarah Hersh, Ph.D., is a member of the music department at Hamline University, where she teaches music history, chamber music, and music education)*

**CSch 0204 MUSIC: THE LISTENER'S ART.** No credit, \$100 (age 62, \$90).

All too often we hear music without really listening to it. Find out how to listen to music perceptively and critically and begin to develop a relevant musical vocabulary. Learn to recognize intervals, phrases, motives, themes, and instruments. Identify meters and try conducting patterns. Begin to recognize chords in musical context and to distinguish between the major and minor modes. Learn to find your way through musical structures such as rondo, sonata form, and fugue. Put all these skills together each week as you listen in depth to classical masterpieces. No previous music experience is required.

Fall Spec Term, Sec 1, Th, 6:30-8:30, Sept. 28-  
Nov. 2 (6 meetings), FergH 203. *No late fee through Sept. 21.*

*(See Sarah Hersh's biography in CSch 0203)*

**CSch 0205 THE MIGHTY PIPE ORGAN: KING OF INSTRUMENTS OR BOX OF WHISTLES?**

No credit, \$67 (age 62, \$60.30).

What is a pipe organ? Discover both the history and function of this instrument through organ "crawls." Learn the history of the instrument's development from its beginnings in the Roman Empire through the flowering in the 17th and 18th centuries in northern Germany and concluding with the tracker revival and reform movement of the middle to late 20th century. Study and compare the four main types of organ action—the tracker, the tubular-pneumatic, the electro-pneumatic, and the electric. Hear the literature of the instrument from Bach to Messiaen performed on famous organs of the Twin Cities. Course begins at Hennepin Avenue United Methodist Church to explore the console and pipe chambers of both the 78 rank, four manual tracker organ in the sanctuary and the nine rank, two manual electro-pneumatic organ in the chapel. Also includes visits to House of Hope Presbyterian Church, Central Lutheran Church, and Northrop Auditorium to see and hear their organs. (Limited to 20)

Fall Spec Term, ★Sec 1, M, 6:30-8:30, Oct. 9-30 (4 meetings), Hennepin Avenue United Methodist Church, 525 Groveland Ave. *No late fee through Oct. 2.*

*(Richard D. Waggoner, D.M.A., was minister of music at Hennepin Avenue Methodist Church for 30 years. He is the author of The Sound of Worship and A Critical Review of the New United Methodist Book of Worship, and has served as dean of the Twin Cities chapter of the American Guild of Organists)*

**CSch 0206 MOZART—THE MUSIC AND THE MAN.**

No credit, \$85 (age 62, \$76.50).

Learn more about Mozart as you read between the lines of letters as well as follow the fantastic notes of his musical compositions. Discover the wide range of his musical skills by listening to selections from his operas, symphonies, and sacred works, paying particular attention to *The Magic Flute*. Gain a more complete understanding of his stature as a composer by learning about the society in which he lived. Read selections from Mozart's family letters and discover how his personality, childhood experiences, and Viennese court life contributed to his music.

Spring Spec Term, Sec 1, T, 6:30-8:30, Apr. 2-30 (5 meetings), FergH 203. *No late fee through Mar. 26.*

*(DonnaMae Gustafson holds a Ph.D. in music from the University of Minnesota. She has taught courses about the music of many historical periods and given previews for St. Paul Chamber Orchestra audiences. Her research includes 16th-century Italian music and theatre)*

**CSch 0207 DISCOVERING THE DRAMA OF RUSSIAN MUSIC.**

No credit, \$85 (age 62, \$76.50).

The music of czarist Russia is characterized by drama, theatricality, and orchestral brilliance. It is also infused with an Eastern, folklike spirit. Explore these themes as well as other Russian musical currents beginning with the 19th-century composers Glinka and Rimsky Korsakov and continuing through the works of Prokofiev and Stravinsky. Hear examples of ballet, opera, and concert music. Learn how a distinctively Russian musical idiom developed in spite of opposition from composers with a more Western attitude.

Winter Spec Term, Sec 1, T, 6:30-8:30, Jan. 9-

Feb. 6 (5 meetings), FergH 205. *No late fee through Jan. 2.*

*(See DonnaMae Gustafson's biography in CSch 0206)*

**CSch 0208 FROM CATHEDRALS AND COURTS: MUSIC OF THE MIDDLE AGES.**

No credit, \$85 (age 62, \$76.50).

Western European music blossomed from roots in medieval city life. Nurtured in Gothic cathedrals, monasteries, and universities, music of this era became the foundation for later centuries. Learn how the ideals of chivalry and courtly love as well as the idea of the divine origin of music influenced music of the Middle Ages. Examine the Gregorian chant repertory of the year 1000. Listen to musical selections to explore festive masses and motets, liturgical drama, songs of troubadours, and religious pilgrims. Includes an examination of visual images of religious and secular life of the Middle Ages illustrated in contemporary painting, sculpture, and architecture.

Fall Spec Term, Sec 1, T, 6:30-8:30, Sept. 26-

Oct. 24 (5 meetings), FergH 203. *No late fee through Sept. 19.*

*(See DonnaMae Gustafson's biography in CSch 0206)*

## Noncredit Courses

**CSch 0210 EARLY JAZZ AND BIG BANDS: MUSIC OF THE SWING ERA.** No credit, \$100 (age 62, \$90).

Travel back in time to when the big band jazz style known as swing was America's popular music. Through digitally remastered recordings and rediscovered movie shorts, revisit the music of the 1930s and 1940s. Learn how Glenn Miller's orchestra made the transition from a popular peacetime big band to the U.S. Army Air Corp's swinging wartime morale booster. Hear the voices of some of the greats: Frank Sinatra, Lena Horne, and Peggy Lee. Discover the differences between these bands by studying their instrumentation, forms, and individual rhythms. Trace the evolution of the swing era through music, video, and class discussion.

Spring Spec Term, Sec 1, M, 6:30-8:30, Apr. 1-  
May 6 (6 meetings), FergH 203. *No late fee through Mar. 25.*

*(Michael Scott has a master's degree in jazz studies from Indiana University and is pursuing a Ph.D. in music education at the University of Minnesota. He has been a music educator and free-lance musician for more than 10 years, performing with the bands of the Temptations, the Four Tops, Perry Como, and Melissa Manchester)*

**CSch 0211 JAZZ IN AMERICA.** No credit, \$100 (age 62, \$90).

Jazz as a style of music in the 1990s is difficult to describe. Although one listener's definition of jazz may be very different from another's, many points of view are valid and justified. Is the bebop style of Dizzy Gillespie the sound of classic jazz, or is it the swing era's Tommy Dorsey? Learn to distinguish between the different styles of jazz by listening to and analyzing music, and understanding its historical perspective. (Limited to 40)

Winter Spec Term, ★Sec 1, W, 6:30-8:30, Jan.  
10-Feb. 14 (6 meetings), FergH 205. *No late fee through Jan. 3.*

*(See Michael Scott's biography in CSch 0210)*

**CSch 0212 THE BLUES: AN OVERVIEW OF THE ROOTS OF AMERICAN MUSIC.** No credit, \$100 (age 62, \$90).

Starting with work songs, field hollers, and early rural blues pieces, explore in layperson's terms the musical style, social implications, and growth of the blues that resulted in early urban blues, rhythm and blues, early rock and roll, and jazz idioms. Explore the music of artists such as Leadbelly, Sleepy John Estes, Floyd Jones, Muddy Waters, Buddy Guy, Johnny Otis, Bessie Smith, Count Basie, and others.

Fall Spec Term, Sec 1, W, 6:30-8:30, Oct. 11-  
Nov. 15 (6 meetings), FergH 203. *No late fee through Oct. 4.*

*(Chris Granias, Ph.D., teaches at the MacPhail Center for the Arts. He has conducted workshops on jazz rock, blues, jazz, and rags, and is also a free-lance composer and a member of the Minnesota Composers Forum)*

**CSch 0213 THE ART OF THE BEATLES: THEIR HISTORY, THEIR MUSIC.** No credit, \$100 (age 62, \$90).

The Beatles were not only the best publicized and most beloved popular music heroes of the 1960s, they were among the most profoundly influential and revolutionary popular artists of the 20th century. The group totally changed the music business of their time and they effected changes in our culture that extend beyond musical considerations. Take a look at the group's evolution and development and pay close attention to each member's role in creating the sound and character of the group. Listen to recordings to discover the creative process as well as the changing image of the Beatles. Course includes both video and audio sources to evaluate the work of the Beatles.

Spring Spec Term, Sec 1, T, 6:30-8:30, Apr. 2-  
May 7 (6 meetings), FergH 205. *No late fee through Mar. 26.*

*(Arne Fogel is an actor, singer, broadcaster, and entertainment historian. He has written, produced, and appeared in hundreds of radio and television commercials, and has also produced numerous radio programs on the subject of American popular entertainment. He received a degree in theatre education from the University of Minnesota)*

**CSch 0214 THE DEFINITIVE VOICE: THE MUSIC OF FRANK SINATRA.** No credit, \$83 (age 62, \$74.70).

With his series of classic albums of the 1950s, Frank Sinatra became THE great Tin Pan Alley archivist. Arriving at his artistic maturity at the very end of the Tin Pan Alley era and through his pioneering grasp of the possibilities inherent in the new long play (LP) recording format, Sinatra provided us with the definitive interpretations of hundreds of classic pop songs in a style that has proven to be timeless. Through audio and video sources, discover the roots of the Sinatra style, the reasons for his success, and the attributes of his singing that have come to represent the absolute pinnacle of the art of pop song interpretation.

Fall Spec Term, Sec 1, T, 6:30-8:30, Oct. 10-  
Nov. 7 (5 meetings), FergH 115. *No late fee through Oct. 3.*

*(See Arne Fogel's biography in CSch 0213)*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

## Theatre

**CSch 0230 IMPROVISATIONAL THEATRE WITHOUT THE JOKES.** No credit, \$116 (age 62, \$104.40).

Are you a funny person? The question is completely irrelevant to this course. Improv can be more than just an excuse for making wisecracks. When approached with the right spirit and the right techniques, it can be real theatre. Learn how to tell stories with beginnings, middles, and ends. Discover the psychological truth of a situation. Acquire a wide range of skills applicable to complex creative tasks, and have fun doing it. (Limited to 15) Spring Spec Term, ★Sec 1, T, 6:30-8:30, Apr. 2-May 14 (7 meetings), NCCE 229. *No late fee through Mar. 26.*

*(Steve Schroer came to the Twin Cities from the University of Chicago, where he was director of the University Theater from 1983-1992 and an instructor in the undergraduate program and in the Center for Continuing Studies)*

**CSch 0231 "PLAY" ACTING: INTERACTIVE THEATRE WORKSHOP.** No credit, \$105 (age 62, \$94.50).

Have you ever wondered how theatre groups develop new works? Now you can explore the same techniques used by theatre collectives such as Teatro Campesino, Pan Asian Repertory, and the Shaman Repertory Theatre. Survey and use international and ethnic theatre techniques to tap your creativity in a nonthreatening environment. Deepen your understanding and appreciation of theatre as collaborative art through beginning exercises in acting and playwriting. Use theatre games, improvisation, and intensive performance techniques as a means to create short pieces like scenes and 10-minute plays. (Limited to 20)

Fall Spec Term, ★Sec 1, W, 6:30-8:30, Sept. 27-Nov. 1 (6 meetings), NCCE 229. *No late fee through Sept. 20.*

*(Eva Lopez is an actor, playwright, theoretician, and director. She is currently involved with Teatro del Pueblo and Teatro Latino, having directed their first production, Bodega. She has studied Theatre of the Oppressed technique with Augusto Boal and is currently pursuing a doctorate in theatre arts)*

**CSch 0232 PENUMBRA'S PORTRAIT OF THE ARTIST AS A SOUL MAN DEAD.** No credit, \$36 (age 62, \$32.40).

Join Penumbra Theatre's founder and director, Lou Bellamy, in a brief but insightful review of *Portrait of the Artist as a Soul Man Dead*, the play by Jakeann Jones premiering fall 1995. Examine the complex and troubled relationship between Sonny Max, a young New York artist, and his jazz-musician father, So-Man, in this intense play "charged with the naked truth of jazz." Following a first-session preview by Bellamy, see the play on your own during the next week. Then return for an engaging review and discussion of the play's significance. (Offered in cooperation with Penumbra Theatre. Limited to 30)

Fall Spec Term, ★Sec 1, M, 7-9, Oct. 30, Nov. 13 (2 meetings), Penumbra Theatre, Auditorium, 270 N. Kent St., StP. *No late fee through Oct. 23.*

*(Louis Bellamy, associate professor at the University of Minnesota and one of the leading black artistic directors in the U.S., has directed numerous plays and given many presentations on black theatre and on the African-American experience as perceived and portrayed in drama and literature)*

## Photography

**CSch 0245 UNDERSTANDING YOUR CAMERA.** No credit, \$100 (age 62, \$90).

An opportunity for people with little or no experience with cameras who want to learn more about photography. Includes a demonstration of equipment, films, processing, critiques of students' work, and discussions on how to make a good photograph. Covers both the technical and aesthetic sides of photography. Bring camera to first class. (Limited to 24)

Fall Spec Term, ★Sec 1, M, 6:30-9, Oct. 2-30 (5 meetings), NCCE 140. *No late fee through Sept. 25.*

Spring Spec Term, ★Sec 2, Th, 6:30-9, Mar. 28-Apr. 25 (5 meetings), NCCE Library. *No late fee through Mar. 21.*

*(David Husom is a professional photographer with numerous exhibits and publication credits. A specialist in digital photography, he is a frequent speaker on the issues of photography, art, and technology)*

## Noncredit Courses

**CSch 0246 DARKROOM AND PHOTOGRAPHY TECHNIQUES.** No credit, \$140 plus \$17 special fee. Total \$157 (age 62, \$126 plus \$17 special fee. Total \$143).

Learn basic camera and darkroom techniques. Print your own black and white photographs using the MacPhail Center darkroom, which is available for student use outside of class time. Informal discussion and critiques guide your development. Bring your camera to the first class. (Limited to 24)

Fall Spec Term, ★Sec 1, T, 6-9:30, Sept. 26-Oct.

24 (5 meetings), MacP 5, Husom. *No late fee through Sept. 19.*

Winter Spec Term, ★Sec 2, T, 6-9:30, Jan. 2-Jan.

30 (5 meetings), MacP 5, Husom. *No late fee through Dec. 27.*

Spring Spec Term, ★Sec 3, T, 6-9:30, Mar. 26-

Apr. 23 (5 meetings), MacP 5, Millikan. *No late fee through Mar. 19.*

*(David Husom is a professional photographer with numerous exhibits and publication credits. A specialist in digital photography, he is a frequent speaker on the issues of photography, art, and technology. Jeff Millikan is a lecturer in the General College and the Department of Studio Arts at the University of Minnesota. His award-winning photography has been exhibited internationally and is in the collections of numerous museums, including Walker Art Center)*

**CSch 0247 MORE DARKROOM AND PHOTOGRAPHY TECHNIQUES.** No credit, \$140 plus \$17 special fee. Total \$157 (age 62, \$126 plus \$17 special fee. Total \$143).

Exposure to advanced photography techniques including pushing film, dodging and burning, contrast controls, toners, matting, and framing. You'll have access to the darkroom at MacPhail Center both in and outside of class. Bring black and white film to develop and negatives and paper to print to the first class. A good refresher for those who want to get back into photography. (Limited to 24)

Fall Spec Term, ★Sec 1, T, 6-9:30, Oct. 31-Nov.

28 (5 meetings), MacP 5, Husom. *No late fee through Oct. 24.*

Winter Spec Term, ★Sec 2, T, 6-9:30, Feb. 6-

Mar. 12 (5 meetings—no class Mar. 5), MacP 5, Husom. *No late fee through Jan. 30.*

Spring Spec Term, ★Sec 3, T, 6-9:30, Apr. 30-

May 28 (5 meetings), MacP 5, Millikan. *No late fee through Apr. 23.*

*(See instructors' biographies in CSch 0246)*

**CSch 0248 GOING FROM HERE: NEW AND ALTERNATIVE DARKROOM TECHNIQUES.** No credit, \$252 plus \$30 special fee. Total \$282 (age 62, \$226.80 plus \$30 special fee. Total \$256.80).

Refine your black and white darkroom skills and learn new experimental techniques. Learn about color slide developing and Cyanotype printing, and visit a Photo CD services provider in this intermediate course. Develop your techniques through personal projects, critiques, and conferences with the instructor. Lab access available the entire quarter. (Limited to 20)

Winter Spec Term, ★Sec 1, Th, 6-9:30, Jan. 4-

Feb. 22 (8 meetings), MacP 5. *No late fee through Dec. 28.*

*(David Husom is a professional photographer with numerous exhibits and publication credits. A specialist in digital photography, he is a frequent speaker on the issues of photography, art, and technology)*

**CSch 0249 THE FINE PRINT AND PERSONAL PHOTOGRAPHIC VISION.** No credit, \$252 plus \$30 special fee. Total \$282 (age 62, \$226.80 plus \$30 special fee. Total \$256.80).

Continue your journey as a photographer and clarify your artistic vision through critiques and individual conferences with the instructor in this intermediate course. Learn black and white darkroom techniques like hand coloring, fiber based printing, and Kodolith film processing. Visit a local museum to discuss the collection with the curator. Lab access available the entire quarter. (Limited to 20)

Spring Spec Term, ★Sec 1, M, 6-9:30, Mar. 25-

May 13 (8 meetings), MacP 5. *No late fee through Mar. 18.*

*(Jeff Millikan is a lecturer in the General College and the Department of Studio Arts at the University of Minnesota. His award-winning photography has been exhibited internationally and is in the collections of numerous museums, including Walker Art Center)*

**CSch 0250 DEMYSTIFYING PHOTOGRAPHY: A LOOK ON THE INSIDE.** No credit, \$135 (age 62, \$121.50).

Take an inside look at the photographic art world and gain insight into the artistic process. Discuss photography with museum curators, gallery directors, and individual artists. Visit museums, galleries, and artists' studios, and tour a commercial processing facility equipped with advanced digital technology. First class is at MacPhail Center; other class sites to be determined at first meeting. (Limited to 15)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.



Fall Spec Term, ★Sec 1, W, 10 a.m.-12, Oct. 25-Nov. 29 (6 meetings), MacP 5. *No late fee through Oct. 18.*

*(See Jeff Millikan's biography in CSch 0249)*

**CSch 0251 PHOTOGRAPHING THE URBAN LANDSCAPE.** No credit, \$96 (age 62, \$86.40).

The Twin Cities area is rich with photographic subjects not found on the picture postcard rack. First examine the work of photographers who have profiled the urban landscape. Then create your own photographs on three half-day Saturday field trips, one of which is at night (**Apr. 6, 13, 20; participants provide own transportation and may choose to carpool**). Finish with two follow-up sessions for viewing and critiquing work. All classes are held at instructor's studio; directions provided prior to first class. (Limited to 15)

Spring Spec Term, ★Sec 1, W, 6:30-8:30, Apr. 3, 24, May 1 (3 meetings plus 3 field trips), StP studio. *No late fee through Mar. 27.*

*(Chris Faust is an award-winning professional photographer and graphic designer whose work has appeared in gallery exhibits and in local and national publications. In 1992 he received a McKnight Photography Fellowship)*

**CSch 0252 OUTDOOR AND LANDSCAPE PHOTOGRAPHY.** No credit, \$110 (age 62, \$99).

Do you like to explore the outdoors? Are you disappointed with the pictures you have of your discoveries? Learn how to capture on film many of the wonderful discoveries that the outdoor world has to offer. Review the basics of camera operation, timing photographs, lighting, motion, and film selection. An all-day Saturday field trip (**Oct. 7; participants provide own transportation and may choose to carpool**) to Jay Cooke State Park (one of the state's most scenic parks) will allow you to experiment with these techniques. Required equipment: a 35mm camera with manual controls for the focus, shutter, and aperture. Suitable for both the beginning and intermediate photographer. (Limited to 20)

Fall Spec Term, ★Sec 1, T, 6:30-8:30, Sept. 26-Oct. 24 (5 meetings plus field trip), AmundH 104. *No late fee through Sept. 19.*

*(John Gregor, a landscape photographer, has taught photography at North Hennepin Community College and the Art Center of Minnesota)*

**CSch 0253 THE PHOTOGRAPHIC PRINT: PAPERS AND TONERS.** No credit, \$96 plus \$5 special fee. Total \$101 (age 62, \$86.40 plus \$5 special fee. Total \$91.40).

Creating a photograph includes more than camera and film. Learn to create an interpretation for your photographic images in this hands-on darkroom class. Discover the vital role papers and toners play in creating a satisfying photograph. Examine over 20 different kinds of black and white photographic paper to see how subtle differences in color, texture, and surface affect the quality of a photographic print. Experiment with different toners like the rich browns of sepia and the purple black of selenium. Create a finished print for class critique. (Limited to 20)

Winter Spec Term, ★Sec 1, M, 6:30-9:30, Jan. 22-Feb. 12 (4 meetings), MacP 5. *No late fee through Jan. 16.*

*(Rebecca Pavlenko, B.F.A. in photography, specializes in portraiture. She has studied with several renowned fine-art photographers; taught at Stillwater State Prison, the Minnesota Museum of American Art, and Vision Quest; and had her work exhibited internationally)*

**CSch 0254 PHOTOGRAPHY: STUDIO LIGHTING.** No credit, \$96 plus \$25 special fee. Total \$121 (age 62, \$86.40 plus \$25 special fee. Total \$111.40).

What's the difference between a cookie and a scrim? Find out in a class that explores the various ways lighting is used to change the appearance of an object. Several techniques will be discussed and demonstrated, including the use of tungsten and strobe equipment. No equipment is necessary, but participants must have a working knowledge of photographic fundamentals. (Limited to 12)

Winter Spec Term, ★Sec 1, W, 6-8, Jan. 10-Feb. 14 (6 meetings), Dayton's Advertising Photography, 701 Industrial Blvd., Mpls (park in lot adjacent to Dayton's warehouse). *No late fee through Jan. 3.*

*(Gary Ness earned a M.F.A. in photography from the University of Minnesota and is currently a commercial photographer at Dayton's Advertising Photography. He has extensive teaching experience, and his work has been exhibited regionally and nationally, including at Film in the Cities Gallery, Peter M. David Gallery, and the Jon Oulman Gallery)*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

## Noncredit Courses

**CSch 0255 PORTRAIT PHOTOGRAPHY.** No credit, \$120 (age 62, \$108).

Learn the skills and techniques to create a variety of styles of portrait photography. Explore the use of backgrounds, posing, lighting, and subject interaction as elements of studio portraiture. These basic techniques provide a basis for extending into environmental portraits and self-portraits, and are the elements for exploring the portrait as information, metaphor, and revelation. You'll need a basic working knowledge of 35mm or medium-format cameras and your own camera and film. All classes are held at the instructor's St. Paul studio; directions provided prior to first class. (Limited to 14)

Winter Spec Term, ★Sec 1, Th, 6:30-9:30, Jan.

18-Feb. 15 (5 meetings), StP studio. *No late fee through Jan. 11.*

*(Rebecca Pavlenko, B.F.A. in photography, specializes in portraiture. She has studied with several renowned fine-art photographers; taught at Stillwater State Prison, the Minnesota Museum of American Art, and Vision Quest; and exhibited her work internationally)*

**CSch 0256 OUTDOOR PHOTOGRAPHY.** No credit, \$110 (age 62, \$99).

Capturing nature on film can be a fascinating challenge. Survey the basic techniques for photographing landscapes, close-ups, and wildlife in color. Additional topics include equipment selection, controlling natural light, and organizing and presenting your work. There will be one half-day Saturday field trip (**May 4; participants provide own transportation and may choose to carpool**). Suggested text: *Nature Photography* by John Shaw. (Limited to 20)

Spring Spec Term, ★Sec 1, T, 7-9, Apr. 2, 16,

30, May 14, 28 (5 meetings plus field trip),

CentLib 6, StP Campus. *No late fee through Mar. 26.*

*(Don Breneman is a photographer for the Minnesota Extension Service and teaches in the Department of Rhetoric at the University of Minnesota. His work is published in University publications, regional magazines, calendars, brochures, and postcards. He has also conducted outdoor photography workshops in Big Sky Montana and Voyageurs National Park)*

**CSch 0257 STREET PHOTOGRAPHY.** No credit, \$120 (age 62, \$108).

Explore the streets of Minneapolis with camera in hand. Study the photographs of Dorothea Lange, Margaret B. White, Paul Martin, Russell Lee, and others to discover their styles. Learn techniques for street photography—including low light issues, preparation for quick imaging, and awareness of components in a good photograph—so that you have eyes on the ends of your fingers. Spend one class in downtown Minneapolis to create your own images. (Limited to 15)

Fall Spec Term, ★Sec 1, M, 6:30-9:30, Nov. 6-

Dec. 4 (5 meetings), MacP 5. *No late fee through Oct. 30.*

*(Peter Martin taught photography for 10 years at the College of Associated Art in St. Paul. His photographs have been exhibited widely, including at pARTS gallery in Minneapolis, the Catherine Nash Gallery at the University of Minnesota, and at Parson's School of Art in Paris. He has an M.A. in mass communications from the University)*

**CSch 0258 PHOTOGRAPHING PEOPLE: MAKING THE CONNECTION.** No credit, \$102 (age 62, \$91.80).

A good photograph is an artifact of a relationship. It is a collaboration between the subject and the photographer. How then does one establish that link, that connection to another human being? This course examines the process of making that connection. It is designed for those who like to photograph people and seek to become more comfortable doing so. Required equipment: 35mm adjustable camera and small flash unit (tripod recommended). Participants will be asked to shoot at least one roll of film and have at least one print (either black and white or color) made for each class session. Includes half-day Saturday field trip (**Oct. 28 for fall; Apr. 20 for spring**). (Limited to 15)

Fall Spec Term, ★Sec 1, W, 6-8, Oct. 11-Nov. 1

(4 meetings plus field trip), 2242 University Ave., Suite 333, StP. *No late fee through Oct. 4.*

Spring Spec Term, ★Sec 2, M, 6-8, Apr. 1-22 (4 meetings plus field trip), 2242 University Ave., Suite 333, StP. *No late fee through Mar. 25.*

*(Steve Schneider is a free-lance commercial photographer who specializes in making photographs of people. He has an M.A. in photojournalism and more than 15 years' experience working in photography)*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

**CSch 0259 COLOR PHOTOGRAPHY.** No credit, \$80 plus \$30 special fee. Total \$110 (age 62, \$72 plus \$30 special fee. Total \$102).

Did you know that film does not see all colors with the same intensity? Or that the overall nature of color changes throughout the day? Learn the meanings of color temperature, color cast, and balance in this five-session course. Discover how color materials work and react with light, be able to pick the best film for a given situation, and know how to adjust for long or short exposures. Develop a visual sensitivity to the actual colors we see (not just what we think we see). You will expose and have developed various kinds of slide film (color negative film may also be used), and present finished images for constructive critiques from classmates. A 35mm camera is necessary and a tripod is helpful. Bring your camera to the first class meeting.

Winter Spec Term, Sec 1, W, 6:30-8:30, Jan. 10-Feb. 7 (5 meetings), KoltH S139. *No late fee through Jan. 3.*

*(Deirdre Monk, M.F.A. in photography, has been a photographer for 25 years and has taught university courses for 11 years. She has been the recipient of a number of awards and grants (including Arts Midwest), and has worked in a large number of collections across the county, including the International Center for Photography and the Library of Congress)*

**CSch 0260 PHOTOGRAPHY AS PERSONAL LANGUAGE.** No credit, \$104 plus \$15 special fee. Total \$119 (age 62, \$93.60 plus \$15 special fee. Total \$108.60).

You own a couple of cameras, perhaps a darkroom, too. Your technique is up to speed, so now what? What will you photograph? What kind of statement will you make? Learn how to make photographs that speak for themselves in this class designed for photographers who are comfortable with their technical ability. Personal instruction and peer group review will help refine ideas and produce images that speak for you. Each class session includes a lecture on topics such as light or time or space; a slide presentation of photographs that effectively use that topic; a discussion of readings and class members' presentations of black and white photos; and a review of photos by the instructor. Participants should be experienced enough to take new steps in manipulating and producing a print. After the first two sessions, class will meet on alternate weeks to allow time for photography. Optional packet of additional reading available for approximately \$15. (Limited to 40)

Fall Spec Term, ★Sec 1, W, 6:30-8:30, Sept. 27-Nov. 15 (6 meetings—no class on Oct. 11, 25), Arch 30. *No late fee through Sept. 20.*

*(Martin Fowler, B.F.A. from the San Francisco Art Institute, has extensive experience in advertising at Dayton Hudson, M.R. Bolin, and Colle and McVoy. He has studied and worked with Imogen Cunningham, Morely Bear, and Ansel Adams. He is currently a partner at the Marketing Alliance and teaches design at Brown Institute)*

**CSch 0261 BLACK ROOTS IN PHOTOGRAPHY: DEFINING THE AFRICAN-AMERICAN EXPERIENCE.** No credit, \$54 (age 62 and WAC members, \$48.60).

This class is offered in conjunction with the exhibit "Dawoud Bey: Portraits 1975-1995" at the Walker Art Center (Sept. 17-Dec. 10). Bey is an African-American photographer from Queens, New York, who photographed Harlem residents in the mid-1970s and who now uses a 20-by-24-inch Polaroid camera for his powerful and intimate portraits. Explore how African-Americans have defined their experience both through their use of photography and by being photographed by others. Survey the involvement of African-Americans in photography and examine the artistic and political significance of their presence in photos throughout history. Using work by African-American photographers like Van DerZee, De Carava, Weems, Parks, Roberts, and Robeson, study the cultural and political forces that contributed to the work of early African-American photographers and how the legacy of their work influences images currently being produced. (Offered in cooperation with the Walker Art Center. Both WAC and Compleat Scholar will accept registrations. Limited to a combined total of 40)

Fall Spec Term, ★Sec 1, Th, 6-8, Sept. 21-Oct. 5 (3 meetings), Walker Art Center, Lecture Room, Vineland Pl., Mpls. *No late fee through Sept. 14.*

*(Earcie Allen left the highly technical field of food science and chemistry for a new career in photography. His work includes portraiture and landscape, and he has worked with Carrie Mae Weems to co-teach a class of young students that resulted in the exhibit "Shades of Color" at pARTs gallery)*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

## Noncredit Courses

**CSch 0262 MORAL DOCUMENTS: DOROTHEA LANGE'S AMERICAN PHOTOGRAPHS.** No credit, \$54 (age 62 and MIA members, \$48.60).

"The contemplation of things as they are." This was the first line of a Francis Bacon quote that Dorothea Lange posted on her darkroom door for many years, and it hints at the mission of a photographer whose moving images symbolize the Great Depression for many Americans. Lange's objectivity was engaged and deeply thoughtful, and her use of photography as the medium for her thoughts resulted in a body of work remarkable for its creative skill and moral urgency. Held in conjunction with the exhibition "Dorothea Lange: American Photographs" at the Minneapolis Institute of Arts (Jan. 6-Mar. 3, 1996), this course examines Lange's rich, complex pictorial legacy and explores the important tradition of social documentary work epitomized by Lange's photographs. (Offered in cooperation with the Minneapolis Institute of Arts. Both MIA and Compleat Scholar will accept registrations. Limited to a combined total of 60)

Winter Spec Term, ★Sec 1, Th, 6:30-8:30, Jan. 18-Feb. 1 (3 meetings), Mpls Institute of Arts, Auditorium, 2400 S. 3rd Ave. *No late fee through Jan. 11.*

*(George Slade is a photographic historian, curator, and writer)*

**CSch 0263 DIGITAL MEDIA OVERVIEW.** No credit, \$135 (age 62, \$121.50).

Discover the growing field of digital photography, imaging, and multimedia. Through lectures, demonstrations, and location visits, learn the fundamentals of computer-based imaging and multimedia. Includes computer basics, digital capture, Photo CD, PC and Macintosh systems, software, CD-ROM, and output. Pay close attention to the fundamentals of imaging and multimedia including resolution, color space, and file formats. (Limited to 24)

Fall Spec Term, ★Sec 1, Th, 6:30-9:30, Sept. 28-Oct. 26 (5 meetings), NCCE 229. *No late fee through Sept. 21.*

Spring Spec Term, ★Sec 2, M, 6:30-9:30, Apr. 1-29 (5 meetings), NCCE 229. *No late fee through Mar. 25.*

*(David Husom is a professional photographer with numerous exhibits and publication credits. A specialist in digital photography, he is a frequent speaker on the issues of photography, art, and technology)*

**CSch 0264 DIGITAL PHOTOGRAPHY WORKSHOP.** No credit, \$260 plus \$75 special fee. Total \$335 (age 62, \$234 plus \$75 special fee. Total \$309).

Learn about the exploding field of digital photography in this basic/intermediate course designed for photographers, designers, printers, and publishers. Discover a variety of digital cameras and computers including high-end Dicomed Imaginator workstations and cameras. Experiment with entry-level and professional equipment. Gain the necessary knowledge to make intelligent decisions about equipment acquisition. (Limited to 12)

Fall Spec Term, ★Sec 1, Th, 6-10, Nov. 2-Dec. 7 (5 meetings—no class Nov. 23), EdHan. *No late fee through Oct. 26.*

Spring Spec Term, ★Sec 2, T, 6-10, Mar. 26-Apr. 23 (5 meetings), EdHan. *No late fee through Mar. 19.*

*(See David Husom's biography in CSch 0263)*

**CSch 0265 HANDS-ON ADOBE PHOTOSHOP.** No credit, \$260 plus \$75 special fee. Total \$335 (age 62, \$234 plus \$75 special fee. Total \$309).

Use state-of-the-art computers to learn or improve your image manipulation skills in this hands-on workshop designed for photographers, designers, and desktop and multimedia publishers. Apple Macintosh computers are used, but the software is identical on a variety of computer platforms including IBM-compatible PCs. Students not familiar with computers and imaging software should first take either Digital Media Overview (CSch 0263) or Digital Photography Workshop (CSch 0264). (Limited to 14)

Fall Spec Term, ★Sec 1, W, 6-10, Sept. 27-Oct. 25 (5 meetings), BioSci 18, StP Campus. *No late fee through Sept. 20.*

Winter Spec Term, ★Sec 2, M, 6-10, Jan. 8-Feb. 12 (5 meetings—no class Jan. 15), BioSci 18, StP Campus. *No late fee through Jan. 2.*

Spring Spec Term, ★Sec 3, T, 6-10, Apr. 30-May 28 (5 meetings), BioSci 18, StP Campus. *No late fee through Apr. 23.*

*(See David Husom's biography in CSch 0263)*

**CSch 0267 COLOR FOR THE COMPUTER USER.** No credit, \$128 (age 62, \$115.20).

From our magazines and office newsletters to our computer screens, we live in an increasingly colorful world. Learn about the basics of color theory, how technology creates the endless hues and values of color, and the artist's approach to color. Examine more advanced areas of color theory through physics, color measurement, color resolution, space, and color separation. Hands-on projects include complementary color charts, a color wheel, Munsell color charts, and color illusions projects. Bring glue sticks, scissors, and ruler the first night of class. Designed for computer uses, photographers, and graphic designers. (Limited to 24)

Winter Spec Term, ★Sec 1, M, 6:30-9:30, Jan. 8-Feb. 12 (5 meetings—no class Jan. 15), NCCCE 229. *No late fee through Jan. 2.*

*(Ann-Marie Rose is a professional photographer and consultant/trainer in the imaging industry. Her digital photographs have appeared in numerous exhibitions and publications, and she has taught at the University of Minnesota, Minneapolis College of Art and Design, and the Winona School for Professional Photography)*

**CSch 0282 VIDEO BASICS.** No credit, \$225 (age 62, \$202.50).

Designed for students with some video experience or none at all, this class focuses on how to shoot professional looking video, how to shoot for the editing booth, and how to use personal experience and talents to create better video programs. Concentrate on camera work and preproduction planning. Learn to work video as an interdisciplinary art form, drawing on life experiences and other mediums (storytelling, song writing, poetry and short story writing, or improvisational acting) to make richer videos. Bring your camcorder or borrow Hi-8 camcorders through Intermedia Arts. (Offered in cooperation with Intermedia Arts. Limited to 15)

Winter Spec Term, ★Sec 1, Th, 6-10, Jan. 11-Feb. 8 (5 meetings), Intermedia Arts, 2822 Lyndale Ave. S., Mpls. *No late fee through Jan. 4.*

*(Kim Downing is a video artist and poet. Her videos have been exhibited at Intermedia Arts Gallery and the Minneapolis Institute of Arts. She has extensive experience teaching video courses and collaborates in the production of "What," a cable television program about local music)*

**CSch 0283 DESKTOP VIDEO.** No credit, \$180 (age 62, \$162).

Powerful computer animation, video editing tools, and network quality color are yours through the use of personal computer technology. Using devices like the Video Toaster, learn to produce video that looks like it was done at a high-end production studio but for a fraction of the cost. Topics covered will be tailored to participants' needs, including 2-D paint box program (drawing and painting, pixel blending, cutting, pasting, copying), digital video effects, and chroma F/X color processor and character generator. Twenty hours of additional computer lab time will be available. (Offered in cooperation with Intermedia Arts. Limited to 10)

Winter Spec Term, ★Sec 1, SaSu, 12-4, Jan. 6, 7, 13, 14 (4 meetings), Intermedia Arts, 2822 Lyndale Ave. S., Mpls. *No late fee through Dec. 29.*

*(Jerome Thelia, B.A. in French and film studies, is access coordinator at Intermedia Arts, where he has taught video production courses. He has done free-lance video work in the Twin Cities and produced animation for the feature film Trauma)*

**CSch 0284 EDITING FOR BEGINNING VIDEOMAKERS.** No credit, \$225 (age 62, \$202.50).

Designed to introduce beginning video makers to the art of editing. Learn professional techniques such as scripting, storyboarding, logging, and editing to create shorter, tighter programs with a more powerful impact. In addition to hands-on skills, class discussion and collaboration will be emphasized to help you produce a video that is easy and fun to watch. Bring your own footage (travel tapes, family videos, or experimental art) to the first class. Four hours of editing lab time will be available each week. (Offered in cooperation with Intermedia Arts. Limited to 15)

Spring Spec Term, ★Sec 1, W, 6-10, Mar. 27-Apr. 24 (5 meetings), Intermedia Arts, 2822 Lyndale Ave. S., Mpls. *No late fee through Mar. 20.*

*(Kim Downing is a video artist and poet. Her videos have been exhibited at Intermedia Arts Gallery and the Minneapolis Institute of Arts. She has extensive experience teaching video courses and collaborates in the production of "What," a cable television program about local music)*

## Noncredit Courses

### Film

**CSch 0285 FROM REEL TO REAL: MOVIE STARS AND STARDOM.** No credit, \$70 (age 62, \$63).

From the beginning of cinema, movie stars have played roles in society as well as on screen. One of their functions has been to appear as "symbolic personalities" who embody cultural ideals for American audiences. Although the era of promoting stars through the grand studios has passed, their lives are still displayed before audiences who, in turn, still revere them beyond reason. Take an in-depth look at stardom and the movies and real and symbolic life both on screen and off. Learn more about historic stars and newer icons, including James Dean, Marilyn Monroe, Judy Garland, Jodie Foster, Clint Eastwood, and Julia Roberts. Consider whether society still needs its stars. (Limited to 25)

Fall Spec Term, ★Sec 1, T, 6:30-8:30, Oct. 10-31 (4 meetings), Ronald M. Hubbs Center for Lifelong Learning, 1030 University Ave., StP.  
No late fee through Oct. 3.

*(Philip Anderson teaches film, television history, and visual and mass communication courses at the Minneapolis College of Art and Design and Metropolitan State University. A film critic for City Pages for many years, he has written numerous free-lance articles for local and national publications)*

**CSch 0286 BACK TO THE FUTURE: MOVIES, TIME, AND TRAVEL.** No credit, \$70 (age 62, \$63).

Movies have the rare and seductive ability to stretch, condense, and scramble time. Making sense of time's mutability and elasticity in cinema can be both a challenge and a treat for moviegoers. This class looks at films and their plots, and what happens when they really test our sense of chronology and history. Understand more about flashbacks and frame stories, flash forwards and parallel edits. Focus closely on some movies that travel through time, questioning history, asking what if?, and generally teasing us with parallel tracks of reality and fiction. Part of the class analyzes the *Back to the Future* trilogy in light of late 20th-century preoccupations about place and time. (Limited to 25)

Spring Spec Term, ★Sec 1, T, 6:30-8:30, Apr. 2-23 (4 meetings), Ronald M. Hubbs Center for Lifelong Learning, 1030 University Ave., StP.  
No late fee through Mar. 26

*(Philip Anderson teaches film, television history, and visual and mass communication courses at the Minneapolis College of Art and Design and Metropolitan State University. A film critic for City Pages for many years, he has written numerous free-lance articles for local and national publications)*

**CSch 0287 CINEMA ART AND STYLE IN THE 1930S.** No credit, \$27 (age 62, \$24.30).

Main Street America in the 1930s presented a grim picture in the midst of the Great Depression. Movies offered an inexpensive escape from the harsh realities of joblessness and hunger, and people flocked to imaginatively decorated art deco theatres to see escapist, futuristic, and entertaining films. Thirties films represented modernism and positive change in their most dramatic form. An important part of the new optimism was the art deco style in films, film sets and decor, and in the theatres themselves, which featured smooth shapes and sleek lines that embodied a future worth moving into—a world of streamlined dreams. Through rare 1930s film sequences, view fabulous film sets and explore the theatre architecture of Jack Liebenberg, a Minneapolis architect who designed over 200 movie theatres during a career that spanned 50 years. (Limited to 35)

Fall Spec Term, ★Sec 1, T, 2-3:30, Sept. 19, 26 (2 meetings), Ronald M. Hubbs Center for Lifelong Learning, 1030 University Ave., StP.  
No late fee through Sept. 12.

*(Herbert Scherer is an associate professor and art librarian at the University of Minnesota. He is writing a history of art deco movie theatres in the United States)*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

## SOCIAL SCIENCES, PUBLIC ISSUES, AND HUMANITIES

### History/Political Science

#### **CSch 0300 OUR FOUNDING MOTHERS: EARLY SUFFRAGETTES AND FEMINISTS.**

No credit, \$70 (age 62 and WCM members, \$63). In remembrance of the 75th anniversary of women achieving the right to vote in the United States, revisit the speeches and writings of three important leaders of the suffrage and women's rights movements: Susan B. Anthony, Sojourner Truth, and Mary Wollstonecraft. Re-examine the visions of these women activists, understand the meaning and significance of the Declaration of Rights and Sentiments, and review the importance of the Seneca Falls, N.Y., convention. Learn about the expectations of these women for society, education, and government regarding the well-being of women and children. (Offered in cooperation with the Woman's Club of Minneapolis. Limited to 35)

Fall Spec Term, ★Sec 1, Th, 10 a.m.-12, Oct. 26-Nov. 16 (4 meetings), Woman's Club of Mpls, 410 Oak Grove. *No late fee through Oct. 19.*

*(Candace Clayton has a Ph.D. in comparative literature from the University of Minnesota. She has taught classes at the University, several Minnesota private colleges, the University of Cincinnati, and Gottingen Universitat in Germany)*

#### **CSch 0301 MERRY MEDIEVAL LIFE IN BRITAIN, IRELAND, AND SCANDINAVIA.**

No credit, \$99 (age 62, \$89.10). Learn about early medieval life in these North Atlantic countries. Examine their religions, literary traditions, legal systems, economies, and social and gender structures. Understand more about local customs, culinary traditions, clothing styles, and folk medicines. Investigate the results of contact between these cultures and the sharing of ideas, customs, and material goods. (Limited to 35)

Spring Spec Term, ★Sec 1, W, 6:30-8:30, Mar.

27-May 1 (6 meetings), FordH 285. *No late fee through Mar. 20.*

*(Terry Fingerhut has lived and traveled extensively in Scandinavia. She has a master's degree with a focus in Hiberno-Norse archaeology and is currently a doctoral student in the Program for Interdisciplinary Archaeological Studies at the University of Minnesota. John Soderberg has a master's degree in Irish literature from Boston College. He is pursuing a Ph.D. in anthropology at the University, specializing in monastic development and Chris-*

*tian archaeology in early medieval Ireland. Susan Pennington has a master's degree in archaeology from the University. Also a Ph.D. student in the Program for Interdisciplinary Archaeological Studies, she is specializing in archaeology and paleoethnobotany)*

#### **CSch 0302 AMERICAN CIVIL LIBERTIES: HISTORY AND RECENT COURT DECISIONS.**

No credit, \$100 (age 62, \$90). Examine American civil liberties issues—free speech and hate speech, affirmative action and reverse discrimination, pornography and censorship, religious freedom and prayer in the schools, right to choose and right to life—within historical and judicial contexts. Consider the impact of recent court rulings in these areas of American society during current times of crisis and change. (Limited to 30)

Spring Spec Term, ★Sec 1, M, 6:30-8:30, Apr. 1-29 (5 meetings), HHHctr 60. *No late fee through Mar. 25.*

*(Paul L. Murphy is regents' professor of American history at the University of Minnesota. His numerous books and articles, including The Constitution in Crisis Times and World War I and the Origins of Civil Liberties, helped shape American constitutional history, particularly civil liberties and civil rights)*

#### **CSch 0304 AMERICA'S WARS.**

No credit, \$120 (age 62, \$108). Learn more about America's involvement in warfare from the woodland conflicts of the French and Indian wars to Operation Desert Storm in the recent clash with Iraq. Through slide lectures and discussion, examine the politics, personalities, strategies, objectives, and the results of these wars. Gain an understanding of the importance of planning, policy development, and logistics, including supply line management, troop deployment, and other aspects of military operations. (Limited to 25)

Fall Spec Term, ★Sec 1, Th, 7-9, Sept. 21-Nov. 2 (7 meetings), HckrH 312, StP Campus. *No late fee through Sept. 14.*

*(Deborah Bachrach is a postdoctoral associate in history at the University of Minnesota. She has written several books, including Pearl Harbor, Custer's Last Stand, and the Spanish-American War, and is currently working on a book on the Crimean War)*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

## Noncredit Courses

**CSch 0306 WOMEN AND CLASSICAL POLITICAL THOUGHT.** No credit, \$72 (age 62, \$64.80).

Aristotle once stated that "the temperance of a man and of a woman are not the same; the courage of a man is shown in commanding, of a woman in obeying." Examine the implications of this statement as well as the origin of the subordination of women in Western political thought. Analyze male depictions of women, family, and gender roles in selected writings, including *Lysistrata* (please read prior to first class), *Antigone*, selections from Plato's *Republic*, and excerpts from *Politics* and *Ethics* found in *Introduction to Aristotle* by R. McKeon (any edition). (Limited to 25)

Fall Spec Term, ★Sec 1, M, 7-9, Oct. 2-23 (4 meetings), HckrH 312, StP Campus. No late fee through Sept. 25.

(David Schultz, Ph.D., is an adjunct professor of political science at the University of Minnesota. He has previously taught political theory and law at Gustavus Adolphus College and Trinity University, and is the author of six books and 20 articles, including a forthcoming text on women and the history of political thought)

**CSch 0307 WOMEN AND MODERN POLITICAL THOUGHT.** No credit, \$90 (age 62, \$81).

Examine the assumptions surrounding the subordination of women in Western political thought. Analyze male depictions of women, family, and gender roles in the writings of John Locke, Mary Wollstonecraft, John Stuart Mill, and Sigmund Freud. Learn the different models and arguments for gender equality and women's liberation in modern and contemporary political thought. Text: John Locke's *Two Treatises of Government* (read the chapter on family in the second treatise prior to first class), John Stuart Mill's *The Subjection of Women*, Sigmund Freud's *Civilization and Its Discontents*, and Mary Wollstonecraft's *A Vindication of the Rights of Women*. (Limited to 25)

Winter Spec Term, ★Sec 1, M, 7-9, Jan. 22-Feb. 19 (5 meetings), HckrH 312, StP Campus. No late fee through Jan. 16.

(See David Schultz's biography in CSch 0306)

**CSch 0308 FAMILIES.** No credit, \$89 (age 62 and MHS members, \$80.10).

Family is a universal human experience. As something quintessentially human, it is also a concept that evokes immediate and often quite intense emotions. Compare your family experience with those of people from different times and other social, economic, and ethnic groups. View the families exhibition at the Minnesota History Center, which

emphasizes family life and history as a dynamic process. Discover family stories, folklore, and memories—the living culture of real people—and see yourself as a reflected image of families that lived in Minnesota history. (Offered in cooperation with the Minnesota Historical Society. Both MHS and Compleat Scholar will accept registrations. Limited to a combined total of 40)

Winter Spec Term, ★Sec 1, Th, 6:30-8:30, Jan.

11-Feb. 8 (5 meetings), Minnesota History Center, Honeywell Commons Room in the Education Center, 345 W. Kellogg Blvd., StP.

No late fee through Jan. 4.

(Elaine May, professor and chair of American studies at the University of Minnesota, has written extensively on the concept of family. Her most recent book, *Barren in the Promised Land: Childless Americans and the Pursuit of Happiness*, will be published soon)

**CSch 0309 AMERICAN INDIAN TRIBAL GOVERNMENT.** No credit, \$110 (age 62, \$99).

Survey the long and complex history of American Indian tribal government. Begin with a brief overview of the relationships between the United States and American Indians, from early contact to the formation of the U.S. government to the subsequent creation of reservations. Examine the laws that created present day tribal governments, government-to-government interaction and treaties, as well as the concept of sovereignty and tribal self-government. Includes a field trip to the Mille Lacs Lake Reservation to observe tribal government activities (10 a.m.-3 p.m., Oct. 12; participants provide own transportation and may choose to carpool; lunch on your own). (Limited to 30)

Fall Spec Term, ★Sec 1, Th, 1-3:30, Sept. 21-

Oct. 5 (3 meetings plus field trip), St. Anthony Park Library, 2245 Como Ave., StP. No late fee through Sept. 14.

(Ron Libertus is a lecturer in American Indian studies at the University of Minnesota)

**CSch 0310 AMERICAN INDIAN STUDIES: AN OVERVIEW.** No credit, \$99 (age 62, \$89.10).

Studying any culture or ethnic group requires a basic context or framework. Begin with an examination of common and sometimes erroneous images and assumptions about American Indians. Then develop a working vocabulary to discover American Indian groups, languages, and lifeways. Sample contributions to American Indian studies literature, music, history, and anthropology, and learn more about American Indian groups in Minnesota. Text: *Native Americans: Portrait of the Peoples* by Dwayne Champagne. (Limited to 25)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.



Fall Spec Term, ★Sec 1, M, 6:30-8:30, Sept. 18-Oct. 23 (6 meetings), NCCE Library. *No late fee through Sept. 11.*

*(Bob Danforth is a teaching specialist in American Indian Studies at the University of Minnesota and a lecturer at the University of Wisconsin, Madison. He has a master's degree in cultural anthropology, and his doctoral dissertation focuses on the social context of Woodland Indian music)*

**CSch 0311 WOODLAND INDIAN STORYTELLING.** No credit, \$83 (age 62, \$74.70).

Winter traditionally was storytelling time for many American Indian groups of Minnesota, including woodland tribes. On dark, windy evenings families gathered to hear stories about tribal tricksters, creation stories, and other tales that imparted important cultural beliefs. Children were instructed in proper behavior through stories that revealed the consequences of unbecoming or negative behavior. Drawing from various sources spanning two centuries, this course informs students of the history and world view of selected woodland tribes, especially focusing on the Ojibwe. (Limited to 25)

Winter Spec Term, ★Sec 1, M, 6:30-8:30, Jan. 22-Feb. 19 (5 meetings), NCCE Library. *No late fee through Jan. 16.*

*(Pauline Brunette Danforth, an Ojibwe Indian, is a doctoral student at the University of Minnesota. She is also an advisor in the University's College of Liberal Arts)*

**CSch 0312 VOICES FROM THE AMERICAN MOSAIC: EXPLORING ETHNIC HISTORY THROUGH ORAL HISTORY AND AUTOBIOGRAPHY.** No credit, \$84 (age 62, \$75.60).

More than ever, Americans are recognizing the reality that ours is indeed a "nation of nations." One of the most effective ways of understanding the current meaning of this is by looking at the historical experiences of ordinary immigrants through their own perspectives. This course introduces students to a selection of writings and recordings containing personal memoirs of immigrants and their descendants. These sources serve as the basis for classroom dialogue on America's immigrant and multicultural heritage. The documents and recordings will be selected from the archives of the Immigration History Research Center, one of the nation's premiere repositories of source material on immigration and ethnicity. (Limited to 25)

Winter Spec Term, ★Sec 1, T, 6-8, Jan. 9-Feb. 6 (5 meetings), Immigration History Research Center, 826 Berry St., StP. *No late fee through Jan. 2.*

*(Joel Wurl is curator and assistant director of the Immigration History Research Center at the University of Minnesota. He is responsible for selecting and acquiring collections, overseeing the archives, and providing reference assistance. He is the author of Discovering the American Mosaic: Some Reflection in Ethnic Archives, Past, Present and Future)*

**CSch 0315 MINNESOTA'S MILLING GIANTS: PILLSBURY, PEAVEY, AND WASHBURN.** No credit, \$51 (age 62 and WCM members, \$45.90).

The Pillsburys, Peaveys, and Washburns were some of Minnesota's most powerful and influential entrepreneurs in the 19th-century Minneapolis milling industry. Explore the milling process and their involvement in it, including the importance of water and technological developments that brought wealth to these men and to Minnesota. Slides, lecture, and discussion highlight this period of Minnesota history. Last class session meets at St. Anthony Lock and Dam for a walking tour of the Minneapolis Mill District beginning at the Upper St. Anthony Falls Lock and Dam. (Offered in cooperation with the Woman's Club of Minneapolis. Limited to 25)

Fall Spec Term, ★Sec 1, Th, 10 a.m.-12, Sept. 21-Oct. 5 (3 meetings), Woman's Club of Mpls, 410 Oak Grove. *No late fee through Sept. 14.*

*(Scott Anfinson is the National Register Archeologist for the State Historic Preservation Office, and is currently pursuing research on Plains Indian archeology, the archeology of cities, and shipwrecks on the Great Lakes)*

## Psychology/Sociology

**CSch 0330 RITES OF PASSAGE FOR LIFE'S TRANSITIONS.** No credit, \$97 (age 62, \$87.30).

The rites of passage that have been so important in marking the individual's movement from one stage of life to another in tribal societies are largely absent in our own. Examine the phenomenon of initiation cross-culturally and from the perspective of depth psychology. Readings and discussion focus on modern passages, from childhood through old age, and the possibilities of enriching our own transitions through the recognition and creation of appropriate rites of passage. Women's experiences will be emphasized. (Limited to 25)

Spring Spec Term, ★Sec 1, T, 6-8, Apr. 30-May 28 (5 meetings), Cathedral Church of St. Mark, 519 Oak Grove, Mpls. *No late fee through Apr. 23.*

*(Jennette Jones, Ph.D. in anthropology and a psychotherapist in private practice, is in the final stage of training as a Jungian analyst)*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

## Noncredit Courses

**CSch 0331 FUNDAMENTALS OF JUNGIAN PSYCHOLOGY.** No credit, \$97 (age 62, \$87.30). How can we best relate to the guides, the saboteurs, the wild animals, and the lovers within? How can we recognize and live with our complexes, understand our dreams, and tap the creative potential at the deep archetypal layers of the psyche? Focus on these and other topics in the psychology of C.G. Jung, the Swiss psychiatrist who—perhaps better than anyone else in the 20th century—explored the symbolic foundations of the human psyche. In addition to selected readings (optional), examine fairy tales, pop culture, political events, and personal experience as illuminated by the central concepts of Jungian psychology. (Limited to 25)

Spring Spec Term, ★Sec 1, T, 6-8, Mar. 26-Apr. 23 (5 meetings), Cathedral Church of St. Mark, 519 Oak Grove, Mpls. *No late fee through Mar. 19.*

(See Jennette Jones's biography in CSch 0330)

**CSch 0332 IN THE LAND BETWEEN HEARTBEATS: STORIES OF DESCENT.** No credit, \$89 (age 62, \$80.10).

Sylvia Brinton Perera, a Jungian analyst, describes the experience of psychological descent as a "sacred process." Others believe that descent can lead to spiritual transformation and even the development of shamanic powers. Yet people who descend in Western society are often labeled depressed or even schizophrenic. While traditional help often responds with medication and easy fixes, waiting is essential to the potential transforming power of a descent. But waiting can be overwhelming without guides. Literature can provide these guides. Read Sumerian myths, *Sleeping Beauty*, the poetry of Yeats, as well as selections from the work of Rich and Judy Grahn, Joanna Macy, Gloria Anzaldúa, and others to discover at-hand guides and sources of comfort. Designed as an educational experience, not as a therapy group. (Limited to 20)

Fall Spec Term, ★Sec 1, W, 6:30-8:30, Sept. 27-Oct. 25 (5 meetings), FordH 120. *No late fee through Sept. 20.*

(Karen Lound, M.F.A. in creative writing from the University of Alabama, has been published in several literary journals and recently was nominated for a Pushcart Prize. She has 10 years' experience teaching composition, literature, and women's studies. She has experienced a descent)

**CSch 0333 THE WOMAN IN THE MIRROR: A GLIMPSE OF JUNGIAN PSYCHOLOGY OF WOMEN.** No credit, \$97 (age 62, \$87.30).

Many women seek to understand themselves and their relation to their surroundings. This course seeks to help in the search, drawing on the insights of many Jungian writers—from Jung's early statements to the amazingly popular ideas in *Women Who Run with the Wolves*. Discuss the meaning of femininity (and masculinity), varying psychic structures, goddess images, and women's developmental stages. Read excerpts from *Woman in the Mirror* by Claire Douglas as well as selections from the writings of Emma Jung, Toni Wolff, Florida Scott-Maxwell, and others.

Fall Spec Term, Sec 1, W, 6:30-8:30, Oct. 11-Nov. 8 (5 meetings), FordH 170. *No late fee through Oct. 4.*

(Mary Ann Mattoon, a practicing Jungian analyst and licensed psychologist, is a clinical professor of psychology at the University of Minnesota. She is the author of Jungian Psychology After Jung and Jungian Psychology in Perspective, and has served as president of the Minnesota Jung Association)

**CSch 0334 EMERGENT IDENTITIES: TRANSGENDER LIVES AND EXPERIENCES.** No credit, \$97 (age 62, \$87.30).

Transgender communities are becoming more visible as differently gendered persons embark on struggles for civil rights, social equity, and pride. What do the lives of transgendered people tell us about the cultures in which we live? How have they challenged dominant concepts of sex, gender, and sexual orientation? In this course designed for human service professionals, examine the meanings, origins, and expressions of cross-gender identity. Study transgender history, culture, and diversity to gain an understanding of transgender identities and communities. Learn how, despite an often marginalized status, the presence of transgender persons has been persistently visible and diverse. Course includes lecture, discussion, carefully selected readings, and presentations by guest lecturers. Designed as an educational experience, not as a therapy group. Jointly sponsored by the Gay, Lesbian, Bisexual, Transgender Program Office at the University of Minnesota.

Spring Spec Term, Sec 1, T, 6:30-8:30, Apr. 2-30 (5 meetings), Arch 50. *No late fee through Mar. 26.*

(Maya Ravyn, Ph.D. in microbiology, is a graduate student in community health education at the University of Minnesota. She has taught classes at the University and has been active in the transgender community. Her research interests focus on health issues of gay, lesbian, bisexual, and transgender adolescents)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

## Anthropology

**CSch 0340 PLANTS AND PEOPLE: ETHNOBOTANY OF THE WESTERN GREAT LAKES.** No credit, \$83 (age 62, \$74.70).

For thousands of years a rich palette of native plants provided people with the necessities of life—food, fuel, medicine, shelter, crafts, and tools. Today, because of the ongoing discovery of medicinal applications of plants from the world's rain forests as well as its temperate zones, the relationship of humans and plants is receiving renewed interest. Additionally, recent archaeological techniques offer surprising insights into early plant use in what are now the states of Minnesota, Wisconsin, Illinois, and Michigan. Learn more about ancient patterns of plant use as seen through archaeology, the oral traditions of American Indians presented by ethnographers, and the written accounts of early European travelers and botanists. Uncover the fascinating story of human and plant interaction, and look at ways in which the Woodland Indians of the area manipulated and used, transported and transplanted plants, thus creating new habitats and new varieties. (Limited to 30)

Fall Spec Term, ★Sec 1, Th, 6:30-8:30, Sept. 21-Oct. 19 (5 meetings), HckrH 210, StP Campus.  
No late fee through Sept. 14.

*(Sissel Johannessen is a doctoral candidate in anthropology at the University of Illinois, Urbana, and serves as an archaeologist in the Army Corps of Engineers St. Paul District. Her areas of research include Peruvian archaeology and paleoethnobotany)*

## Archaeology

**CSch 0345 ARCHAEOLOGY OF MINNESOTA.** No credit, \$85 (age 62, \$76.50).

From arrowheads to fine china brought over the ocean in barrels, Minnesotans have left a trail. Follow this trail by examining artifacts at Historic Fort Snelling. Survey the discipline of archaeology as it has been used in exploring Minnesota since European settlement. Learn how archaeologists determine the use and significance of these artifacts. Discover how archaeological investigations continue to provide valuable insight into the early inhabitants of Minnesota. Learn how archaeologists work and why they continue to dig when written records exist. Examine methods of artifact dating and how artifacts are used to determine site function and to interpret the past. (Limited to 15)  
Spring Spec Term, ★Sec 1, T, 6-8, Apr. 2-30 (5 meetings), Historic Fort Snelling, StP. No late fee through Mar. 26.

*(Robert Clouse, Ph.D., is head of the archaeology department at the Minnesota Historical Society.)*

*His research includes a survey and testing of development projects for the Mille Lacs Band of Ojibwe, a survey of a mid-18th-century French fur trading post at Crane Lake, and an excavation of the historic Forestville Townsite in Fillmore County)*

**CSch 0346 ARCHAEOLOGY: WHAT IS AN ARCHAEOLOGICAL LAB?** No credit, \$51 (age 62, \$45.90).

Each summer thousands of people throughout the United States are involved in excavating a variety of archaeological sites. The excavation of a site, however, is only the first step in studying the life of a people at any given place. It is in the archaeological laboratory that many of the questions that intrigue archaeologists are finally answered. This introduction to many of the methods used in archaeological laboratory work is for those with no previous involvement in archaeology.

Winter Spec Term, Sec 1, W, 6:30-8:30, Jan. 10-31 (4 meetings), Institute for Minnesota Archaeology, 3300 University Ave S.E., Suite 204. No late fee through Jan. 3.

*(Clark Dobbs, senior research archaeologist at the Institute for Minnesota Archaeology, has worked on a variety of archaeological projects in North America and has directed projects in several Mid-west states. He is currently conducting research in southern Minnesota on the pre-history of the Oneota villages near Red Wing)*

**CSch 0347 RISE OF CIVILIZATION: THE OLD WORLD.** No credit, \$102 (age 62, \$91.80).

What does civilization mean? What is social complexity? Learn how civilizations developed in different places and times in prehistory. In this first part of a two-course series on the rise of civilization around the world, discuss the characteristics of civilization and investigate how it arose out of simpler societies throughout Asia, Africa, and Europe. From Mesopotamian temples to Egyptian pharaohs (and their pyramids) and Indus Valley cities unrecorded in history, focus on the environmental, economic, religious, and political aspects of the primary developments of civilization in the Old World. These illustrated lectures and discussions discover the development of some of the outstanding features of Old World civilizations, including monumental architecture, written records, and advanced forms of political organization.

Fall Spec Term, Sec 1, T, 10:15 a.m.-12:15, Oct. 10-Nov. 14 (6 meetings), Gloria Dei Lutheran Church, 700 S. Snelling Ave., StP. No late fee through Oct. 3.

*(Deborah Shepherd earned her Ph.D. in interdisciplinary archaeological studies at the University of Minnesota. Her dissertation research focused on the funerary ritual and symbolism of burial practices in late Iron Age Finland)*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

## Noncredit Courses

**CSch 0348 RISE OF CIVILIZATION: THE NEW WORLD.** No credit, \$68 (age 62, \$61.20). What does civilization mean? What is social complexity? In the second part of our investigation of the rise of civilization around the world, focus on the cultures of the Americas. Begin with the Olmec and Maya of Mesoamerica, the oldest of New World cultures, and follow with the development of chiefdom and state-level societies from North to South America. Inquire how each of these societies grew in complexity, how they thrived, why some stagnated, and why some came to a sudden demise due to natural, economic, or political causes. Discussion includes the large communities of the Mississippi and Southwest traditions in North America, the massive urban centers of central Mexico, and the succession of Andean city-states culminating in the Incan Empire. Class includes illustrated lectures with opportunity for discussion. CSch 0247 suggested but not required.

Winter Spec Term, Sec 1, T, 10:15 a.m.-12:15,

Jan. 9-30 (4 meetings), Gloria Dei Lutheran Church, 700 S. Snelling Ave., St. Paul. *No late fee through Jan. 2.*

(See Deborah Shepherd's biography in CSch 0347)

## Geography

**CSch 0350 HISTORIC MINNEAPOLIS: A WALKING TOUR.** No credit, \$31 (age 62, \$27.90). Discover the historic city of Minneapolis. The tour begins on the south tip of Nicollet Island Park and explores, in part, both the east and west banks of the Mississippi. Minneapolis has aggressively remodeled its core area, and though most of what it encompasses is only about 30-years old, this tour searches out visible remnants of the old city, as well. The walk covers the Gateway district, the warehouse area, the core of downtown, and newer developments near Loring Park, with a stop midway for a break. Examine the forces that have transformed the downtown, and look at new and historic styles of architecture. Tour is two or three miles, so wear comfortable walking shoes. In case of inclement weather, the tour will be postponed to Saturday, May 18. (Limited to 25)

Spring Spec Term, ★Sec 1, Sa, 1-4:30, May 11 (1 meeting), meet at Nicollet Island Park. *No late fee through May 3.*

(Judith Martin is the director of urban studies at the University of Minnesota. Her research interests

include contemporary urban development and design, historic preservation, and urban history. She was the instructor for *The Meanings of Place*, an Independent Study television course, and has published widely on aspects of Twin Cities development)

**CSch 0351 DOWNTOWN VERSUS EDGE CITIES.** No credit, \$65 (age 62 and WCM members, \$58.50).

American downtowns were once a place for everyone, a place to see a first-run movie, attend theatre, shop, or simply gather with friends. However, U.S. urban areas have changed dramatically in recent decades, and many downtowns have faced increased economic and social pressures, including rising crime rates, higher concentrations of low-income residents, and declining real estate values. As urban edges have expanded, downtown centers have changed and been rebuilt. Take a look at issues concerning downtown redevelopment and address the questions: Do we still need downtowns, and what do we want to use them for? Are we content to continue evolving in a way that rejects downtown as a 21st-century option? (Offered in cooperation with the Woman's Club of Minneapolis. Limited to 35) Spring Spec Term, ★Sec 1, W, 10 a.m.-12, May 1-15 (3 meetings), Woman's Club of Mpls, 410 Oak Grove. *No late fee through Apr. 24.*

(See Judith Martin's biography in CSch 0350)

## Humanities/Philosophy/Religion

**CSch 0355 WHAT IS HUMAN NATURE?** No credit, \$78 (age 62, \$70.20).

Human nature is a paradox, at once obvious and elusive. How is human nature related to the nature of other species? Will our genes tell us the truth about who and how we are? Are some of us, as Aristotle claimed, destined to be slaves or kings? Or are we born equal, as Jefferson said in the Declaration of Independence? What is the vision of other theo-political traditions regarding human nature; for example, indigenous people of the Americas who share spirit with other species, Buddhists who have transcended lower forms in other lives, and others? Wonder about all of this in dialogue with the instructor and with one another. (Limited to 25)

Winter Spec Term, ★Sec 1, M, 1-3, Feb. 5-26 (4 meetings), MacP. *No late fee through Jan. 29.*

(Harvey Sarles is a professor of cultural studies and comparative literature at the University of Minnesota. He has a background in anthropology and linguistics and a special interest in human nature arguments)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

**CSch 0358 ANCIENT MYSTERIES OF THE BIBLE.** No credit, \$85 (age 62 and JCC-StP members, \$76.50).

Who were the Philistines and when did they arrive in the Biblical Near East? How could Moses have had two fathers-in-law if he was married once, never divorced, and never widowed? Did the famed walls of Jericho come crashing down with the onslaught of Joshua's priestly trumpeters? Did the zealots at Masada in the end triumph over Rome's military might? Was the death of these zealots fate or folly? Through slides, text, and video, explore these and other mysteries of the Biblical world in this five-part series. The literary and archaeological record of the ancient Near East helps explain some of the enigmas that have confronted scholars for millennia. (Offered in cooperation with the Jewish Community Center of Greater St. Paul. Limited to 30)

Winter Spec Term, ★Sec 1, Th, 7-9, Feb. 1-29 (5 meetings), Jewish Community Center of Greater St. Paul, 1375 St. Paul Ave. *No late fee through Jan. 25.*

(Steven Derfler, Ph.D., is area executive director of the American Jewish Committee and an adjunct associate professor at the University of Wisconsin-River Falls. He continues to co-direct archaeological expeditions to Israel and has been actively involved in educating people about the ancient and modern Middle East)

**CSch 0362 AUTHENTICITY: A PATH FOR LIVING IN SPIRIT.** No credit, \$116 (age 62, \$104.40).

Knowledge and experience together bring forward paths of authenticity. Through conscious experiential learning comes awareness of ones' deep center. Discover ways of knowing yourself and others with depth and wholeness. Learn that when the authentic self leads, it allows for both inner well-being and outer flow. Study issues such as the courage to be and living in the present that existentialists bring to the discussion. Read selections of scholars including Mary Belenky, Carol Gilligan, Carl Rogers, Krishnamurti, James M. Burns, and others. View films that illuminate this inquiry. Course includes dialogue, inner reflection, and support for the uniqueness of your individual path. (Limited to 16)

Fall Spec Term, ★Sec 1, M, 6:30-8:30, Oct. 2-Nov. 6 (6 meetings), FordH 60. *No late fee through Sept. 25.*

(V. Lois Erickson, associate professor in educational psychology at the University of Minnesota, has taught courses in the areas of educational psychology, human development, inner work, and spirituality)

**CSch 0380 CRISISTHEOLOGY: GOD AGAINST RELIGION.** No credit, \$68 (age 62, \$61.20).

The number of religious paths readily available to the seeker is increasing exponentially. Amidst this whirl of spiritual retreats, literature, and music, encounter a novel voice—a theology that sees any religious road as humanity's path of retreat from God: a theology that understands faith not as a collection of answers to humanity's questions, but an engagement in the struggle, tensions, and contradictions of the human condition, the Bible, and life. Explore some roots of this thought in Kierkegaard and Dostoyevsky as well as its blossoming in the theology of Karl Barth. Discuss who God is, what faith looks like, and what the Bible is about according to this theology. Look at the context that gave rise to Barth's most vehement objections to humanly derived religion (Hitler's German Christian Movement).

Winter Spec Term, Sec 1, T, 6:30-8:30, Jan. 9-30 (4 meetings), FolH 326. *No late fee through Jan. 2.* (Debbie Blue, M.A. in religion from Yale Divinity School, is a child advocate/educator for children who are victims of domestic violence. She has also served as a lay minister and community organizer)

**Ethics and Public Issues****CSch 0390 WHOSE BODY IS IT, ANYWAY? ETHICS IN MEDICINE.** No credit, \$84 (age 62, \$75.60).

What ethical basis is there for pulling the plug on a respirator that is sustaining the life of a comatose patient? Should fetal tissue be used experimentally to relieve the suffering of Parkinson's disease? Should taxpayers bear the considerable expense of a heart transplant or caring for a severely imperiled newborn? Explore these and other questions through discussion of actual cases. Review the philosophical bases of various positions taken in the professional codes of doctors and nurses. Become familiar with a practical method for raising and addressing ethical issues in health care, and become aware of your own personal principles for deciding whether actions are ethical. Guest speaker at one session. (Limited to 25)

Fall Spec Term, ★Sec 1, Th, 6:30-8:30, Oct. 5-Nov. 2 (5 meetings), Arch 35. *No late fee through Sept. 28.*

(Stephen Daniel is the coordinator of the Minnesota Area Geriatric Education Center in the Institute for Health Sciences Research at the University of Minnesota. He was formerly on the faculty of the Eastern Virginia Medical School and the Morehouse School of Medicine. He has a doctorate in interdisciplinary humanities and master's degrees in English and theology)

## Noncredit Courses

### **CSch 0391 MORALITY AND FOREIGN POLICY.** No credit, \$83 (age 62, \$74.70).

The crises in Somalia and Bosnia have once again brought to the forefront questions about the ways in which moral obligations affect, or should affect, the foreign policy of the major world powers. Why were U.S. and other forces sent into Somalia, but only with the greatest reluctance were they committed in Bosnia? What were the differences in these two situations? Learn about the possibilities and limits of acting morally in the arena of nation-states. (Limited to 25)

Fall Spec Term, ★Sec 1, M, 6:30-8:30, Oct. 2-30 (5 meetings), St. Anthony Park Library, 2245

Como Ave., StP. *No late fee through Sept. 25.*

*(Steven Bayne earned a master's degree in foreign affairs from the University of Virginia and is completing his Ph.D. at the University of North Carolina at Chapel Hill in political theory)*

### **CSch 0392 CAN I MAKE A DIFFERENCE? GAINING PUBLIC ACCESS TO GOVERNMENTAL DECISION MAKING.** No credit, \$68 (age 62, \$61.20).

The United States was created as a participatory democracy. What does that mean in our current climate, and what is our individual responsibility for involvement in our government? Use writings of Thomas Jefferson and James Madison to examine the foundations of public involvement in American government. Discuss how critical issues such as low voter turnouts, complicated organizational structures, public apathy, interest groups, and news media interpretations of events influence public involvement and governmental decisions. How has current "customer driven" organizational theory influenced changes in how our government works? Investigate successful efforts led by private citizens to influence governmental decisions, how and why these work, and how these techniques can be applied to local and national government. Examples used emphasize natural resource- and recreation-related issues. (Limited to 30)

Spring Spec Term, ★Sec 1, T, 6:30-8:30, Apr. 9-30 (4 meetings), Arch 20. *No late fee through Apr. 2.*

*(Ron Nickerson is a park planner with the Minnesota Department of Natural Resources and a graduate student in the Department of Forest Resources at the University of Minnesota. He was a staff member with the Minnesota House of Representatives Appropriations Committee from 1987 to 1991)*

### **CSch 0393 A PRACTICAL AND LEGAL GUIDE TO PRESERVING GREEN SPACE IN YOUR COMMUNITY.** No credit, \$100 (age 62 and Bell Museum members, \$90).

Are you concerned about saving your favorite woods, prairie, or wetland from development? Discover your legal rights and political options to protect community green space. Learn about the rights of private citizens and citizens groups versus private developers (including practical tips on organizing a neighborhood group); the rights of private citizens versus government entities; government regulation of private land development including the rights and obligations of planning commissions, park commissions, city councils, and watershed districts; government acquisition and regulation of green space; and protection programs available to private landowners. For novices and seasoned activists, an opportunity to share experiences. (Offered in cooperation with the Bell Museum of Natural History. Limited to 20)

Fall Spec Term, ★Sec 1, W, 6:30-8:30, Oct. 11-Nov. 15 (6 meetings), BellMus 175 (use auditorium entrance facing Church Street).

*No late fee through Oct. 4.*

*(Thomas E. Casey has been a practicing attorney for 20 years with an emphasis on environmental and land use issues. He has represented many citizens groups in land preservation cases, has seven years' experience on a City Park and Open Space Commission, and is a member of a land trust)*

### **PSch 0394 GAYS, LESBIANS, AND THE LAW: THE HUMAN RIGHTS ISSUE OF THE NINETIES.** No credit, \$84 (age 62, \$75.60).

"Gays and lesbians are the targets of the nineties," says national right-wing leader Lou Sheldon. Activists like Sheldon are attempting to pass legislation that denies equal rights to sexual minorities in more than half the country. In 42 states, gays and lesbians are legally losing their homes, children, jobs, and educational opportunities because of their sexual identity. Learn the state of the law and how it affects sexual minorities through the study of legislation, Supreme Court cases, and articles. This class is designed not only for those who may have experienced discrimination, but also for human resource professionals who must deal with these issues in the workplace. (Limited to 30)

Fall Spec Term, ★Sec 1, M, 6:30-8:30, Oct. 9-Nov. 6 (5 meetings), FordH 170. *No late fee through Oct. 2.*

*(Rebecca Lovejoy, coordinator of the Anti-Violence and Harassment Program at the Gay and Lesbian Community Action Council, earned her J.D. from Marquette University Law School. She has extensive experience training organization and government personnel on human rights issues)*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

## WRITING AND LITERATURE

### Creative Writing Series

**CSch 0400 CREATIVE WRITING.** No credit, \$112 (age 62, \$100.80).

Look at a wide spectrum of genres—from fiction to creative nonfiction and memoir—and work on developing a specific voice for your writing. Review the writing process, working on how to begin, when to end, and how to uncover the real narrative from a first draft. Understand issues involved in generating new material as well as in shaping and polishing early drafts. Gain insights and critical review of your work through comments and suggestions from peers and the instructor in a positive environment. (Limited to 20)  
Fall Spec Term, ★Sec 1, Th, 2-4, Sept. 21-Nov. 2 (7 meetings), Ronald M. Hubbs Center for Lifelong Learning, 1030 University Ave., StP.  
*No late fee through Sept. 14.*

Fall Spec Term, ★Sec 2, T, 6:30-8:30, Sept. 26-Nov. 7 (7 meetings), HckrH 210, StP Campus.  
*No late fee through Sept. 19.*

*(Melanie Richards is a graduate student in creative writing at the University of Minnesota. She has won several awards for her poetry and prose, and her writing has been published in Yankee, Harvard Review, Shenandoah, 26 Minnesota Writers, and other publications)*

**CSch 0401 GRAMMAR FOR CREATIVE WRITERS.** No credit, \$99 (age 62, \$89.10).

What makes Hemingway's stories different from Virginia Woolf's? How does the language in the poetry of e.e. cummings contrast with that of Dylan Thomas? Differences include subject matter, of course, but the most powerful distinctions derive from language. Sound, syntax, and other elements of grammar are the forces that breathe life into creative writing. Read from a variety of writers' short works—including stories, essays, and poetry—while keeping a careful eye on language, and then apply your new understanding of style and language to enrich your own creative work. This course is for language lovers and for creative writers who want to learn more about language and how elements of grammar affect the creative process. (Limited to 22)

Spring Spec Term, ★Sec 1, M, 6:30-8:30, Mar. 25-Apr. 29 (6 meetings), HckrH 312, StP Campus. *No late fee through Mar. 18.*

*(Anna Fellegy is a doctoral candidate at the University of Minnesota specializing in English linguistics. An editor for seven years, she has worked on a variety of topics and styles of writing, from newsletters to scientific articles. Her prose writing has focused on feature articles for University publications)*

**CSch 0402 JOURNAL KEEPING: WRITING OUR WAY INTO SPRING.** No credit, \$95 (age 62, \$85.50). *Includes box lunch.*

"In a way, winter is the real spring, the time when the inner thing happens, the resurgence of nature" (Edna O'Brien). When snow swirls outside our windows, we'll gather to write in our journals, that most generous of books, ever evolving, ever offering new possibilities. Together we'll discover new ways of approaching, observing, questioning, and appreciating our lives and the world around us. We will try a variety of writing exercises to expand the way we write in our journals. **To request a vegetarian box lunch, please call the CSch office (624-8880) at least one week prior to class.** (Limited to 22)

Winter Spec Term, ★Sec 1, Sa, 9 a.m.-4, Feb. 3 (1 meeting), EBCEC 156, StP Campus. *No late fee through Jan. 26.*

*(Phebe Hanson is a journal writer, poet [Sacred Hearts, Milkweed Editions], and associate professor emerita in the Liberal Arts Division of the Minneapolis College of Art and Design, where she teaches writing and literature courses)*

**CSch 0403 "INTELLIGENCE WITH THE EARTH": WRITING AND READING ABOUT NATURE.** No credit, \$114 (age 62, \$102.60).

Enjoy a class that provides time to stroll amid the beautiful setting of the Minnesota Valley National Wildlife Refuge. Write and share your writing about your personal experiences in nature, and help yourself recollect and reconstruct your relationship with the natural world. Contemporary nature writing offers a view into the wild heart of the world and renews our souls, but nature writing is not a recent genre. Over 150 years ago, Thoreau asked questions that remain relevant today: "Shall I not have intelligence with the earth? Am I not partly leaves and vegetable mould myself?" Before the contributions of nature writers like Carson and Leopold were works by White, Audubon, Crevecoeur, and many others. Through readings from *The Norton Book of Nature Writing*, class discussion, sharing of experiences, and writing within an informal community of beginning and intermediate writers, explore the wild and wonderful places that sustain the wildness in our hearts. (Limited to 20)

Spring Spec Term, ★Sec 1, Sa, 1:30-4, Apr. 13-May 18 (6 meetings), Minnesota Valley National Wildlife Refuge, Classroom B, 3815 E. 80th St., Bloomington. *No late fee through Apr. 5.*

*(Blaine Cross is a writer, editor, and teacher who is working on a Ph.D. in English at the University of Minnesota. His work explores contemporary American nature writing. He has taught courses in composition, literature, and creative writing)*

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## Noncredit Courses

**CSch 0404 JOURNAL WRITING.** No credit, \$99 (age 62, \$89.10).

Journal writing is an expressive form that is free from conventions and rules. You cannot do it wrong. Students write about their lives and what they are thinking and, when they choose, share their work with others in the class. For those who love the journal form and have had no experience writing journals, or for those who have taken previous journaling classes. Students read journals and diaries of writers both past and present. Suggested text: Tristine Ranier's *The New Diary*. (Limited to 20)  
Fall Spec Term, ★Sec 1, T, 10 a.m.-12, Oct. 3-

Nov. 7 (6 meetings), MacP. *No late fee through Sept. 26.*

*(Edith Mucke, assistant professor emerita, is a former director of Continuing Education for Women at the University of Minnesota. She is the author of Beginning in Triumph. A worldwide traveler who has written 17 travel journals, she has taught journal writing for more than 20 years, encouraging and inspiring students to write)*

**CSch 0405 WRITING THROUGH GRIEF AND LOSS.** No credit, \$96 (age 62, \$86.40).

After any significant loss—death, divorce, disappointment—an individual experiences grief. Lasting from months to years, grief is part of the healing process. Writing is a tool for healing and for life. Explore this tool as a means to honor your personal journeys through regular writing in a journal, use the page as a listener when your story must be told and retold, and learn from the act of writing what the inner self can teach. Focus on techniques of writing as discovery and as craft, and on aspects of the healing process. Although this is not a therapy group, a confidential and supportive atmosphere is maintained. Come to each class with an easy-writing pen and a simple notebook. (Limited to 16)

Fall Spec Term, ★Sec 1, W, 1-3, Sept. 27-Nov. 1 (6 meetings), Linden Hills Library, 2900 W. 43rd St., Mpls. *No late fee through Sept. 20.*

Spring Spec Term, ★Sec 2, W, 6-8, Apr. 3-May 8 (6 meetings), St. Anthony Park Library, 2245 Como Ave., StP. *No late fee through Mar. 27.*

*(Elizabeth Johnson received her M.A. in creative writing from the University of Minnesota and is currently an advanced graduate student in English at the University. She is also a nurse)*

**CSch 0406 READING AND WRITING SUCCESSFUL SHORT FICTION.** No credit, \$112 (age 62, \$100.80).

Discover how successful short fiction writers use narrative techniques such as point of view and dialogue to create classic works of art. While there are no formulas to follow, we will analyze the works of a broad range of writers from William Faulkner and Virginia Woolf to Joyce Carol Oates, Flannery O'Connor, and John Barth. This course is designed for creative writers who seek inspiration from great writing as well as for casual readers who wish to have a better appreciation of literature. Students will write in and out of class and produce a work of short fiction. The text for this class is *The Story and Its Writer*, Ann Charters, ed. (Limited to 20)

Fall Spec Term, ★Sec 1, Th, 6:30-8:30, Sept. 21-Nov. 2 (7 meetings), LindH 303. *No late fee through Sept. 14.*

*(Mark B. Robson, Ph.D. in English literature, is a free-lance writer whose creative and scholarly work has appeared in many publications. He is an experienced educator, and four of his one-act plays have been performed off-Broadway in New York)*

**CSch 0407 SELF AND PLACE IN CREATIVE WRITING.** No credit, \$96 (age 62, \$86.40).

Learn to articulate the connections between self and place, history and geography, and inner and outer landscapes to create stories grounded in place. Your place may be outdoors, in the mountains, by a quiet stream, the desert, a backyard, an urban park, a street, a house, a kitchen, or an office building. The philosophical foundation of this course is that self is grounded in geography and memory is invested in place. Students will read and write in and out of class, sharing work in a semiformal class setting. Open to beginning and advanced writers working in any genre. Course materials include an anthology. (Limited to 18)

Spring Spec Term, ★Sec 1, W, 6:30-8:30, Apr. 3-May 8 (6 meetings), Arch 30. *No late fee through Mar. 27.*

*(Blaine Cross is a writer, editor, and teacher. He is working on his Ph.D. in English at the University of Minnesota, exploring contemporary American nature writing. He has taught courses in composition, literature, and creative writing)*

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**CSch 0408 DEAR FRIENDS: THE ART OF WRITING LETTERS.** No credit, \$64 (age 62, \$57.60).

In a world of faxes and voicemail messages, the letter can be the most intimate, telling, and persuasive communication today. Create a family treasure with thoughtful missives to a child, a young adult in college, or a sibling across the state. Learn to use your pen as a sword and help further a cause. Let your philosophy dazzle, your personality sparkle as you rekindle a romance or start a new one. Describe what being in Venice is really like—not just “wish you were here.” Focus on techniques and exercises to improve your letter-writing skills. Letters from correspondents such as George Bernard Shaw, D.H. Lawrence, and Virginia Woolf will be explored. (Limited to 30)

Winter Spec Term, ★Sec 1, M, 6:30-8:30, Jan. 22-Feb. 12 (4 meetings), LindH 303. *No late fee through Jan. 16.*

*(Patty Lynch is a playwright and avid correspondent. She has taught writing classes at the Playwright's Center and at colleges across the Midwest)*

**CSch 0409 PHOTOGRAPHY AS TEXT: USING PHOTOS AS WRITING PROMPTS.** No credit, \$83 plus \$5 special fee. Total \$88 (age 62, \$74.70 plus \$5 special fee. Total \$79.70).

Because an extraordinary variety of images inundates us daily, we often separate the visual from the written in our minds. But what do we see in photographs, and how do we talk and write about it? Focusing on connections between photography and writing, examine photography of all types—photojournalism, art and fashion photography, landscapes, and snapshots from the family album. Then use the inspiration these images offer for all kinds of writing—narratives, poetry, essays, response writing. One class will meet at the Minneapolis Institute of Arts to view and discuss the “Dorothea Lange: American Photographs” exhibit. This class is designed for beginning and intermediate writers, and while you may do some limited photography outside class, technical fluency with photography is not required. (Limited to 25)

Winter Spec Term, ★Sec 1, Th, 6:30-8:30, Feb. 8-Mar. 7 (5 meetings), St. Anthony Park Library, 2245 Como Ave., StP. *No late fee through Feb. 1.*

*(Ellen Austin, a St. Paul photographer, combines writing and photography in her work, which has been exhibited throughout the Midwest. She is currently completing a master's degree in English education at the University of Minnesota)*

**CSch 0410 SUDDEN FICTION: WRITING THE SHORT-SHORT STORY.** No credit, \$96 (age 62, \$86.40).

Explore the art of the short-short story—those evocative, two- or three-page prose pieces (give or take a page) which lately became popular under the banners of “sudden fiction” or “flash fiction.” Short-shorts aren't really new (think back to the highly condensed stories of writers like Hemingway, Colette, and Isaac Babel). What is new is the attention they are getting from readers and editors and, perhaps, their relevance in this age of sound bites and short attention spans. Learn what makes a good short-short tick by reading works of various authors, writing some short-shorts, and sharing your work in a relaxed, supportive, and fun environment. Beginning writers are welcome. Course materials include an anthology. (Limited to 20)

Winter Spec Term, ★Sec 1, W, 6:30-8:30, Jan.

10-Feb. 14 (6 meetings), AmundH 104. *No late fee through Jan. 3.*

*(Blaine Cross is a writer, editor, and teacher. He is working on his Ph.D. in English at the University of Minnesota, exploring contemporary American nature writing. He has taught courses in composition, literature, and creative writing)*

**CSch 0411 CELEBRATING THE CITY: READING AND WRITING ABOUT NORTH AMERICA'S CITIES.** No credit, \$80 (age 62, \$72).

What is the soul or spirit of the city? Is it different for Minneapolis than for St. Paul or for other cities you've lived in? How do you celebrate your existence within city boundaries? What does the city give to you; what do you give to your city? What special places do you like to walk, bike, drive to? What makes the street you live on unique? Explore the many perspectives of living in the city, with special focus on life in Minneapolis and St. Paul. Enjoy poems, essays, and other works relating to city life. Share experiences and points of view through discussion and in-class writing. (Limited to 20)

Fall Spec Term, ★Sec 1, W, 6-8, Sept. 27-Oct. 25 (5 meetings), Hillcrest Recreation Center, 1978 Ford Pkwy., StP. *No late fee through Sept. 20.*

*(Elizabeth Kilde Fischer has an M.A. in English and creative writing from the University of Minnesota. She has taught poetry and writing classes at the University and in public schools, and has published some of her work)*

## Noncredit Courses

### **CSch 0412 CROSSING GENRES: POETS WRITING PROSE.** No credit, \$96 (age 62, \$86.40).

Some of our finest prose writers started out as poets: Margaret Atwood, Jayne Anne Phillips, Charles Baxter, Michael Ondaatje, and others. Work on making this transition in your writing, emphasizing issues such as length, pacing, narrative and non-narrative structure, and voice. Also review the spectrum of prose genres and internal and external landscapes as organizational devices for your work. While the primary focus of the course is writing, short readings and written interviews with writers working in both genres are included. (Limited to 20)

Winter Spec Term, ★Sec 1, Th, 6:30-8:30, Feb.

1-Mar. 7 (6 meetings), HckrH 312, StP

Campus. *No late fee through Jan. 25.*

*(Melanie Richards is a graduate student in creative writing at the University of Minnesota. She has won several awards for her poetry and prose, and her writing has been published in Yankee, Harvard Review, Shenandoah, 26 Minnesota Writers, and other publications)*

### **CSch 0414 WRITING CHILDREN'S LITERATURE.** No credit, \$83 (age 62, \$74.70).

Writing a children's book is not child's play. Some writers claim it's the most demanding work they have done. If you have always wanted to write for children, but were unsure about where to start, this class offers an opportunity to develop the essential elements of good stories—plot, character, setting, and voice. Study picture books and juvenile novels to learn what makes a good children's book. Share your works-in-progress and listen to other writers' works to learn how to make your own writing better. Understand more about working with an illustrator and marketing your stories. This class is designed for beginning and intermediate writers. If you are working on a children's book or short story, please bring your manuscript to the first class. (Limited to 20)

Fall Spec Term, ★Sec 1, Th, 1-3, Sept. 28-Oct.

26 (5 meetings), Washburn Library, 5244

Lyndale Ave. S., Mpls. *No late fee through Sept. 21.*

Spring Spec Term, ★Sec 2, T, 6:30-8:30, Apr. 9-

May 7 (5 meetings), Hillcrest Recreation

Center, Village View Room, 1978 Ford Pkwy., StP. *No late fee through Apr. 2.*

*(Phyllis Root has been writing for children for 14 years, ever since her first class through Continuing Education for Women at the University of Minnesota. She has published 14 books, several short stories, and a middle-grade novel, and she has just begun working as an instructor for the Institute of Children's Literature in Connecticut)*

### **CSch 0415 WRITING FANTASY AND SCIENCE FICTION FOR PUBLICATION.** No credit, \$120 (age 62, \$108).

Imaginative fiction writing comes in a variety of forms, ranging from alternative history and cyberpunk to high fantasy. However, the common denominator among all these subgenres is their central purpose: conveying a sense of wonder. Experience the practical process of science fiction and fantasy writing, including world-building, story and character development, research, critiquing techniques, manuscript preparation, and market analysis. You are encouraged to share copies of your work, in any stage of development, to benefit from fellow writers' insights and suggestions, and to receive a detailed response from the instructor. Students must purchase a packet of essays and articles. (Limited to 20)

Spring Spec Term, ★Sec 1, W, 6:30-8:30, Mar.

27-May 15 (8 meetings), ClaOff B36, StP

Campus. *No late fee through Mar. 20.*

*(Peg Kerr completed an M.A. in English language and literature at the University of Minnesota, specializing in science fiction and fantasy. Her work has appeared in a variety of science fiction magazines and anthologies)*

### **CSch 0416 READING AND WRITING WOMEN'S AUTOBIOGRAPHY.** No credit, \$103 (age 62, \$92.70).

Read short excerpts from the autobiographical writings of other women, including Leslie Marmon Silko, Adrienne Rich, Maya Angelou, May Sarton, and Patricia Hampl, and gather inspiration and courage to examine your own life. Then remember and write down some of your own stories to gain an appreciation and understanding of your journey thus far. (Limited to 20)

Fall Spec Term, ★Sec 1, M, 10:15 a.m.-12:15,

Oct. 2-30 (5 meetings), Gloria Dei Lutheran

Church, 700 Snelling Ave. S., StP. *No late fee through Sept. 25.*

*(Phebe Hanson is a journal writer, poet [Sacred Hearts, Milkweed Editions], and associate professor emerita in the Liberal Arts Division of the Minneapolis College of Art and Design, where she teaches writing and literature courses)*

**CSch 0417 POETRY AND MEMORY.** No credit, \$95 (age 62, \$85.50). *Includes box lunch.*

"I remember black winter waters" (Carl Sandburg). "I remember how it was to drive in gravel" (Theodore Roethke). "Remember my horse running" (N. Scott Momaday). "Remember the sky that you were born under" (Joy Harjo). In this day-long workshop we'll combine several writing exercises with discussion of the role of memory in poetry and explore some of the many ways memory presents itself in poetry. In addition to the above poets, we'll look at the work of Elizabeth Bishop, Philip Larkin, James Wright, Robert Hayden, Wendy Rose, and others. We'll also take note of number of theories of memory—screen memory, the objective psyche, the anima mundi—by the likes of Freud, Jung, and Yeats. The day will begin and end with an open reading. **To request a vegetarian box lunch, please call the CSch office (624-8880) at least one week prior to class.** (Limited to 20)

Fall Spec Term, ★Sec 1, Sa, 9 a.m.-4, Oct. 21 (1 meeting), EBCEC 156, StP Campus. *No late fee through Oct. 13.*

*(Michael Dennis Browne is a professor of English at the University of Minnesota and the recipient of a 1989 Distinguished Teacher Award from the College of Liberal Arts. He is the author of four published collections of poetry, including You Won't Remember This, winner of the Minnesota Book Award for Poetry)*

**CSch 0418 POETRY AND THE SPIRIT.** No credit, \$72 (age 62, \$64.80).

"She says when she can't pray/She calls up Prairie Grass" (Pam Kremer, "Epiphany"). Our text for these sessions will be *Cries of the Spirit*, edited by Marilyn Sewall. Together we'll explore a number of ways of writing out of our spiritual beliefs and practices, ways which engage the reader and avoid the pitfalls of much conventionally devotional verse. How do we, in this demanding century and in the midst of a rigorously secular society, give voice to our deepest feelings on the deepest of subjects? We'll combine writing exercises and open readings with group discussions of a number of vivid contemporary poems which do justice to the intensities of feeling and thought aroused by a commitment to the sacred invisible. (Limited to 20)

Spring Spec Term, ★Sec 1, T, 6:30-8:30, Apr. 9-23 (3 meetings), AmundH 104. *No late fee through Apr. 2.*

*(See Michael Dennis Browne's biography in CSch 0417)*

**CSch 0419 WOMEN'S PASSAGES THROUGH POETRY.** No credit, \$80 (age 62, \$72).

How have you used poetry? What role has it played in your life passages? As we read the works of 20th-century women poets writing in the United States, various passages emerge: changing roles, journeys, crossing boundaries, transgressions and reparations, acts of "passing," and experiencing political and cultural transformations. Using Florence Howe's 1993 collection, *No More Masks*, we'll begin to map some of the personal and cultural routes women have taken. Come read, discuss, and take the words of poets beyond the page and into your lives and places and ideas. (Limited to 25)

Winter Spec Term, ★Sec 1, M, 6:30-8:30, Jan. 22-Feb. 19 (5 meetings), Lutheran Church of the Good Shepherd, 4801 France Ave. S., Edina (park in and enter from south lot). *No late fee through Jan. 16.*

*(Ilene Alexander completed master's degrees in English and women's studies at Mankato State University and is currently a doctoral candidate in American studies at the University of Iowa. She has taught a variety of literature and writing classes)*

## Professional Writing Series

**CSch 0430 MAGAZINE WRITING AND MARKETING.** No credit, \$119 (age 62, \$107.10).

Designed to help writers sell their nonfiction work to local and national magazines. In a supportive workshop atmosphere, learn how to analyze markets, write query letters, conduct interviews, as well as research, organize, and write articles. (Limited to 16)

Fall Spec Term, ★Sec 1, W, 1-3, Sept. 27-Nov. 8 (7 meetings), Washburn Library, 5244 Lyndale Ave. S., Mpls. *No late fee through Sept. 20.*

*(Susan Perry has written articles for more than 100 magazines and newspapers, including Woman's Day, Working Woman, and the Minneapolis Star Tribune. She is a former writer/editor for Time-Life Books, co-author of Nightmare: Women and the Dalkon Shield, The Secrets Your Body Clocks Reveal, and Natural Menopause, and has ghosted or contributed to a variety of other books)*

## Noncredit Courses

### CSch 0431 WRITING A BOOK PROPOSAL.

No credit, \$85 (age 62, \$76.50).

Designed to help writers put together a finished nonfiction book proposal to send to an agent or publisher. Emphasis is on nonfiction. Students learn how to research, write, and market a proposal, and should come to the first class with an idea for a book. (Limited to 20)

Fall Spec Term, ★Sec 1, W, 7-9, Sept. 20-Oct. 25 (5 meetings—no class Oct. 18), Washburn Library, 5244 Lyndale Ave. S., Mpls. *No late fee through Sept. 13.*

Spring Spec Term, ★Sec 2, W, 1-3, Apr. 3-May 1 (5 meetings), Washburn Library, 5244 Lyndale Ave. S., Mpls. *No late fee through Mar. 27.*

(See Susan Perry's biography in CSch 0430)

### CSch 0433 INTRODUCTION TO SCREEN-

**WRITING.** No credit, \$165 plus \$4 special fee. Total \$169 (age 62, \$148.50 plus \$4 special fee. Total \$152.50).

Patterned after techniques used by screenwriter Frantisek Daniel at the Prague Film Academy, this class examines screenwriting as craft by using various exercises to teach character development, story structure, visual writing, and dialogue. The course follows the assumption that to learn screenwriting, one must write. To that end, students are expected to write on a regular basis, and class sessions are limited in size and designed to enhance this approach. Guided by the instructor in a positive, constructive learning environment, students read assignments aloud and participate in discussions/critiques. Although there is no assigned text, written and video handouts are used and each student receives a screenplay for use as a script format guide. First class is a group meeting of both sections. (Limited to 8)

Fall Spec Term, ★Sec 1, Sa, 10 a.m.-12:30, Sept. 23-Nov. 11 (8 meetings), NCCE 229 (park in Church Street Garage). *No late fee through Sept. 15.*

Fall Spec Term, ★Sec 2, Sa, 10 a.m.-12:30, Sept. 23; 1-3:30, Sept. 30-Nov. 11 (8 meetings), NCCE 229 (park in Church Street Garage). *No late fee through Sept. 15.*

(Steve Larson is an award-winning screenwriter and filmmaker who has taught screenwriting classes at several colleges and the former Film in the Cities. He studied with Frantisek Daniel, noted international screenwriting professor, and screenwriter Waldo Salt [Midnight Cowboy and Coming Home]. His independent film feature credits include the award-winning 7,000 Cows in Guatemala)

### CSch 0436 INTRODUCTION TO COPY-EDITING. No credit, \$131 (age 62, \$117.90).

A practical, intensive introduction to basic editorial skills. **Extensive weekly homework assignments** are designed to help class members master editing marks, word usage, consistency, fine points of grammar, and other copyediting problems. Recommended for people whose jobs require editing skills, writers, and others who enjoy language and words. Text: *The Chicago Manual of Style* and possibly other supplemental readings. (Limited to 27—limit is absolute, no instructor permission)

Fall Spec Term, ★Sec 1, Th, 6:30-8:30, Sept. 21-Nov. 9 (8 meetings), BlegH 420, LaVigne. *No late fee through Sept. 14.*

Fall Spec Term, ★Sec 2, T, 6:30-8:30, Oct. 10-Nov. 28 (8 meetings), Arch 20, Medeiros. *No late fee through Oct. 3.*

Winter Spec Term, ★Sec 3, W, 1-3, Jan. 31-Mar. 20 (8 meetings), MacP, Perry. *No late fee through Jan. 24.*

Spring Spec Term, ★Sec 4, T, 6:30-8:30, Mar. 26-May 14 (8 meetings), AmundH 124, Medeiros. *No late fee through Mar. 19.*

(Pamela LaVigne is a writer and editor with extensive experience in magazine and book publishing. Richard Medeiros, an editor and teacher of writing and literature for 15 years, copyedits on a free-lance basis. Susan Perry is a former writer/editor for Time-Life Books who now works full-time as a free-lance writer and editor)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

## Minnesota Writers Series

Enjoy the quiet beauty of the Minnesota Landscape Arboretum as a special setting for listening to and learning from some of Minnesota's very talented writers. Participate in one or all four day-long writing workshops with authors whose genres include fiction, essays, poetry, and novels. Drawing from their work and that of other writers, and from sharing short selections of your own writing, learn more about source, context, and inspiration in writing, as well as potential ways to enrich your own style and technique. Featured writers for 1995-96 include **Deborah Keenan**, whose new book of poetry, *Happiness*, was just published by Coffeehouse Press; **Davida Adedjouna**, whose short story "Bingo," heard on Minnesota Public Radio, is now on audio cassette; **Will Weaver**, whose writing for young adults includes the novels *Striking Out* and *Farm Team*; and **Kate Green**, author of five novels, eight books for children, and two books of poetry. See CSch 0450, 0451, 0452, and 0453 for information about each workshop session and author.

**CSch 0450 POETRY AS PROCESS, PRACTICE, AND PROMISE.** No credit, \$95 (age 62 and Arboretum members, \$85.50). *Includes lunch.* Join this all-day workshop and travel the distances between lyrical poems, narrative poems, and poems of contemplation and meditation. Discuss how landscape influences our images and helps us tell the truth. Think about which people in our lives we "let in" to our poems, and which people we try to keep out. Look at many forms for poetry—as Levertov said, "Form is nothing more than revelation of content." Then explore rhyme, meter, stanza size, list poems, sequence poems, the idea of editing by adding material; review title choices, pronoun choices, and self-censorship. Some authors who may guide us include Charles Simic, Jim Moore, Audre Lorde, Yehuda Amichai, Anne Hebert, Marie Luise Kaschnitz, Michael Harper, Joy Harjo, John Ashbury, and Laura Jenson. Plan on a day of writing, discussing, reading aloud, and the creation of several first drafts of work worth completing. **To request a vegetarian box lunch, please call the CSch office (624-8880) at least one week prior to class.** (Offered in cooperation with Minnesota Landscape Arboretum. Admission fee to Arboretum waived with course registration receipt. Limited to 22)

Spring Spec Term, ★Sec 1, Sa, 9:30 a.m.-4:30, Mar. 30 (1 meeting), Minnesota Landscape Arboretum, Snyder Bldg., Classroom 1, 3675 Arboretum Dr., Chanhassen. *No late fee through Mar. 22.*

(*Deborah Keenan, poet and adjunct professor of creative writing at Hamline University, recently had her book of poetry, Happiness, published by Coffeehouse Press. In addition to several books of poetry, she has had poems and essays published in more than 50 literary magazines*)

**CSch 0451 RE-INVOKING THE SPIRIT: EXERCISES IN THE ART OF REVISION.** No credit, \$95 (age 62 and Arboretum members, \$85.50). *Includes lunch.*

Revision is, quite literally, to see again through new eyes. Yet revision as art is often confused with editing for style. For many writers the first draft of their work is written passionately, with full cooperation of the muse. But to revise the 2nd, 10th, or 20th draft demands a different approach to one's writing. In this hands-on workshop, we will use interdisciplinary exercises—from imaging to drawing for the nonartist—to see once again a favorite strong poem, journal entry, or essay. Bring colored pencils, file cards, and a small selection of your writing. **To request a vegetarian box lunch, please call the CSch office (624-8880) at least one week prior to class.** (Offered in cooperation with Minnesota Landscape Arboretum. Admission fee to Arboretum waived with course registration receipt. Limited to 22)

Spring Spec Term, ★Sec 1, Sa, 9:30 a.m.-4:30, Apr. 20 (1 meeting), Minnesota Landscape Arboretum, Snyder Bldg., Classroom 1, 3675 Arboretum Dr., Chanhassen. *No late fee through Apr. 12.*

(*Davida Adedjouna is a writer and a faculty member in Hamline University's M.F.A. writing program. An excerpt from her novel The Mythmakers is included in the anthology I Know What the Red Clay Looks Like: Conversations with Black Women Writers. A variety of her literary work for children is forthcoming, and her short story "Bingo," heard on Minnesota Public Radio, is available on audio cassette*)

## Noncredit Courses

### **CSch 0452 FICTION SHORT AND SWEET: WRITING STORIES AND NOVELS FOR YOUNG ADULTS.** No credit, \$95 (age 62 and Arboretum members, \$85.50). *Includes lunch.*

Explore fundamental techniques, including plot, setting, characterization, dialogue, and many others, necessary in writing fiction of any kind, but especially for the younger reader. With a keen eye toward craft, this workshop looks beyond mechanics to how successful writers achieve the art of creating "authentic," believable fiction—stories that appear to live and breathe upon the page. Connecting with the teenage reader is also an important part of the discussion, including appropriate language, storylines, and themes. **To request a vegetarian box lunch, please call the CSch office (624-8880) at least one week prior to class.** (Offered in cooperation with Minnesota Landscape Arboretum. Admission fee to Arboretum waived with course registration receipt. Limited to 22)

Spring Spec Term, ★Sec 1, Sa, 9:30 a.m.-4:30, May 18 (1 meeting), Minnesota Landscape Arboretum, Snyder Bldg., Classroom 1, 3675 Arboretum Dr., Chanhassen. *No late fee through May 10.*

(*Will Weaver is the author of Red Earth, White Earth and A Gravestone Made of Wheat, as well as two recent novels for young adults, Striking Out and Farm Team. Living with his wife and two kids in Bemidji near the headwaters of the Mississippi River, he teaches writing at Bemidji State University*)

### **CSch 0453 AMERICAN MAGICAL REALISM: A WRITING AND READING WORKSHOP.** No credit, \$95 (age 62 and Arboretum members, \$85.50). *Includes lunch.*

Magical Realism is sometimes thought to be limited to works of Latin American writers such as Borges, Garcia Marquez, and Allende. In this workshop, discover that Magical Realism is strong and alive in North America, from New Mexico to Lake of the Woods, from Florida and Brooklyn to Venice Beach. Invoking the voices of fiction writers Toni Morrison, Ana Castillo, Alice Hoffman, Pierre DeLattre, and Tim O'Brien, as well as poets Linda Gregg, Raymond Carver, Ntozake Shange, and Richard Hugo, discover ways that magical mystery can "tour" the everyday reality of contemporary fiction. Listen to Kate Green's own experience in combining supernatural elements with mystery in her award-winning novels *Shattered Moon*, *Black Dreams*, and *Angel Falls*. Using writing and creative visualization exercises, Green will help you identify your own sources of magic and mystery, drawing on myths, fairy tales, family stories, ancestors, ghosts, spirits, angels, dreams, and nature. Spend a day

infusing your writing craft with the playfulness, humor, surprise, and power of magic. **To request a vegetarian box lunch, please call the CSch office (624-8880) at least one week prior to class.** (Offered in cooperation with Minnesota Landscape Arboretum. Admission fee to Arboretum waived with course registration receipt. Limited to 22) Spring Spec Term, ★Sec 1, Sa, 9:30 a.m.-4:30, June 8 (1 meeting), Minnesota Landscape Arboretum, Snyder Bldg., Classroom 1, 3675 Arboretum Dr., Chanhassen. *No late fee through May 31.*

(*Kate Green is the author of five novels, eight books for children, and two books of poetry. Her work has been nominated for the Edgar Allen Poe Award by Mystery Writers of America, awarded the Minnesota Book Award, selected as an American Library Association Notable Book of the Year, and optioned several times for film. Currently completing a three-book contract with Harper Collins, she lives in St. Paul with her three sons*)

## Literature About Women

### **CSch 0455 WOMEN IN LITERATURE: THE PORTRAYAL OF WOMEN IN LITERATURE.**

No credit, \$97 (age 62 and WCM members, \$87.30). More novels have been written by men than by women, yet women are frequently the central characters. Describing emotional, moral, and social predicaments facing women allowed novelists to explore the human condition and incidentally provide insight into the role of women through modern history. Prior to the 20th century, this role was very limited. With few exceptions, wife/mother was the only role society considered permissible and desirable. This year's literary works discuss the fate of "the strong woman" as portrayed by both women and men writers from France, England, and Scandinavia. Fall readings include Stendhal's *The Red and the Black* and Balzac's *Cousin Bette*. Winter focuses on Thackeray's *Vanity Fair* and Brontë's *Jane Eyre*. Spring offers Undset's *Kristin Lavransdatter* and Dinesen's *Winter's Tales*. (Offered in cooperation with the Woman's Club of Minneapolis. Limited to 50)

Fall Spec Term, ★Sec 1, F, 10 a.m.-12, Oct. 13-Nov. 17 (6 meetings), Woman's Club of Mpls, 410 Oak Grove. *No late fee through Oct. 6.*

Winter Spec Term, ★Sec 2, F, 10 a.m.-12, Jan. 19-Feb. 23 (6 meetings), Woman's Club of Mpls, 410 Oak Grove. *No late fee through Jan. 12.*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

Spring Spec Term, ★Sec 3, F, 10 a.m.-12, Apr. 19-May 24 (6 meetings), Woman's Club of Mpls, 410 Oak Grove. *No late fee through Apr. 12.*

*(Johanna Kheim has taught French and humanities at the University of Minnesota. Her doctoral studies at the University were in comparative literature with a focus on the 19th- and 20th-century novel)*

**CSch 0456 SOUTHERN WOMEN WRITERS AND THE SHORT STORY.** No credit, \$135 (age 62, \$121.50).

The short story in the United States has been shaped from the beginning by women writers. This is particularly true in Southern literature, where the telling of a tale is so central to the entire culture. Compare and contrast works by such classic writers as Katherine Anne Porter, Eudora Welty, and Flannery O'Connor with stories by contemporary Southern women, and assess the use of this legacy by more recent writers as well as their fresh contributions to the genre. Address some key questions: How does gender influence content and form? How does race play itself out within and across color boundaries? What role does memory play in these stories? Of what value is the work of Southern women writers to women in the Midwest? Students must purchase a packet of short stories by Southern women writers. (Limited to 30)

Fall Spec Term, ★Sec 1, M, 6:30-8:30, Oct. 2-Nov. 13 (7 meetings), LindH 305. *No late fee through Sept. 25.*

*(Toni McNaron is a professor of English and women's studies at the University of Minnesota. Her publications include work on Virginia Woolf and lesbian poetry, and she edited Voices in the Night: Women Speaking About Incest and The Sister Bond: A Feminist View of a Timeless Connection. Her autobiography, I Dwell in Possibility, was published in 1992)*

## Multicultural Literature

**CSch 0465 LATIN AMERICAN FICTION.** No credit, Sec 1-4, \$153 (age 62, \$137.70); Sec 5 and 6, \$138 (age 62, \$124.20).

Latin American fiction has enjoyed a creative renaissance over the past 50 years, suggesting a growing sense of Latin American identity from Argentina to Mexico and Brazil to Peru. Over the course of three terms, read and study works by writers from several Latin American countries to gain an overview of fiction produced in Central and South America as a whole. Includes works by Carlos Fuentes (fall), Vargas Llosa (winter), and Isabel Allende (spring). (Limited to 40)

Fall Spec Term, ★Sec 1, T, 1-3, Oct. 10-Dec. 12 (10 meetings), MacP. *No late fee through Oct. 3.*

Fall Spec Term, ★Sec 2, W, 10 a.m.-12, Oct. 11-Dec. 13 (10 meetings), MacP. *No late fee through Oct. 4.*

Winter Spec Term, ★Sec 3, T, 1-3, Jan. 9-Mar. 12 (10 meetings), MacP. *No late fee through Jan. 2.*

Winter Spec Term, ★Sec 4, W, 10 a.m.-12, Jan. 10-Mar. 13 (10 meetings), MacP. *No late fee through Jan. 3.*

Spring Spec Term, ★Sec 5, T, 1-3, Apr. 9-June 4 (9 meetings), MacP. *No late fee through Apr. 2.*

Spring Spec Term, ★Sec 6, W, 10 a.m.-12, Apr. 10-June 5 (9 meetings), MacP. *No late fee through Apr. 3.*

*(Johanna Kheim has taught French and humanities at the University of Minnesota. Her doctoral studies at the University were in comparative literature with a focus on the 19th- and 20th-century novel)*

**CSch 0466 CRUISING THE CARIBBEAN THROUGH NATIVE EYES.** No credit, \$85 (age 62, \$76.50).

Get to know a Caribbean beyond the one portrayed in multicolored tourist brochures. Learn about this region's history and literature, and the daily lives of people who live on the islands visited by cruise ships from the U.S. and other Western countries. What lies beyond the blue waters and sparkling sands? Read short stories and essays from Trinidad, Antigua, and Guadeloupe, and see films that show you the people who live and struggle in these island paradises. (Limited to 30)

Spring Spec Term, ★Sec 1, T, 6:30-8:30, Mar. 26-Apr. 23 (5 meetings), FolH 134. *No late fee through Mar. 19.*

*(April Knutson completed her master's and doctoral degrees in French at the University of Minnesota, where as an adjunct faculty member in women's studies, she has taught several classes on emerging literatures, including literature of the Caribbean. She has also published articles on writers from Guadeloupe and Martinique)*

## European and American Literature

**CSch 0475 REVISITING THE AMERICAN DREAM THROUGH WRITING AND LITERATURE.** No credit, \$95 (age 62, \$85.50).

What are your memories about growing up in America? What are your assumptions about the American dream? Immerse yourself in readings, discussions, and writing exercises to illuminate the relationship between expectations about the American dream and the realities of life for many people in this country. How do these differences between perception and reality affect the formation of one's identity? How have they shaped your own world view? Using a variety of American "growing-up" stories, including work by Annie Dillard (*An American Childhood*), Tobias Wolff (*This Boy's Life*), and Sandra Cisneros (*House on Mango Street*), discuss and write about the concept of hope in lives that sometimes seem harsh and challenging. (Limited to 25)

Fall Spec Term, ★Sec 1, T, 6:30-8:30, Oct. 10-Nov. 14 (6 meetings), HckrH 312, StP Campus. *No late fee through Oct. 3.*

*(Diane Lunde received her doctorate in English from the State University of New York at Albany. Her writing has appeared in literary journals across the country. She is currently writing and teaching in the Twin Cities)*

**CSch 0476 MORE ABOUT THE AMERICAN DREAM.** No credit, \$95 (age 62, \$85.50).

Come along for a literary ride into America's heartland and prepare yourself to write about your perceptions of the American dream. Using works like Toni Cade Bombara's *Gorilla My Love*, Marilynne Robinson's *Housekeeping*, and Larry McMurtry's *Horseman, Pass By*, this course expands and enriches discussions and writing begun in *Revisiting the American Dream* (CSch 0475). As you consider a variety of new settings for analyzing and writing about growing up in America, examine the revelatory experience of realizing the gap between assumption and reality; how people both reproduce and resist social expectations of others; the results of the changing conceptions of the American family; and the unusual strengths people tap to persevere in the face of great adversity and crisis. Use readings, discussions, and writing to frame these issues within the context of place in developing identity and sense of self. Ponder some questions: How does rural life differ from the urban experience? Does growing up in the south differ from living in the southwest? Newcomers are welcome; participation in CSch 0475 not required. (Limited to 25)

Winter Spec Term, ★Sec 1, T, 6:30-8:30, Jan. 9-Feb 13 (6 meetings), HckrH 100, StP Campus. *No late fee through Jan. 2.*

*(See Diane Lunde's biography in CSch 0475)*

**CSch 0477 A POET'S ARMCHAIR TOUR OF THE BRITISH ISLES: WALES, IRELAND, AND SCOTLAND.** No credit, \$85 (age 62 and WCM members, \$76.50).

Travel beyond the writings of Dylan Thomas, W.B. Yeats, and Robert Burns to explore the works of contemporary men and women poets in the British Isles—against a historical overview of the countries themselves. View travel films of Wales, Ireland, and Scotland, and then, steeped in the language of the bards, drink tea and write your own poems—first by imitating the masters and then by following your own instincts. Be prepared to learn a few Gaelic and Celtic words. (Offered in cooperation with the Woman's Club of Minneapolis. Limited to 18)

Winter Spec Term, ★Sec 1, Th, 10 a.m.-12, Feb. 1-29 (5 meetings), Woman's Club of Mpls, 410 Oak Grove. *No late fee through Jan. 25.*

*(Candace Clayton, Ph.D. in comparative literature, is an award-winning poet who has taught at the Loft, at the University of Minnesota, and in the Minnesota Writers in the Schools Program. Through a Welsh National Gymanfa Ganu Grant, she is conducting research in Wales for the bilingual Anthology of Contemporary Welsh Women Poets, which she is co-editing)*

**CSch 0478 FITZGERALD AND THE JAZZ AGE.** No credit, \$95 (age 62, \$85.50).

In celebration of the centenary birthday of Minnesota novelist F. Scott Fitzgerald, revisit several of his works in the context of what came to be called the "jazz age"—the period from the end of World War I to the stock market crash of 1929. In addition to studying Fitzgerald as the literary spokesperson of this era, read works by other writers and examine figures in music and the other arts. (Limited to 25)

Winter Spec Term, ★Sec 1, W, 2-4, Jan. 17-Feb. 14 (5 meetings), Ronald M. Hubbs Center for Lifelong Learning, 1030 University Ave., StP. *No late fee through Jan. 10.*

*(Philip Furia is a professor of English and American studies at the University of Minnesota. He has written and lectured on several American poets and writers, including Fitzgerald, and his book, The Poets of Tin Pan Alley, was published by Oxford University Press)*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.



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**CSch 0479 NEW TRENDS IN PICTURE BOOKS FOR CHILDREN.** No credit, \$69 (age 62, \$62.10).

Many contemporary picture books for children differ from classics like Wanda Gag's *Millions of Cats*, Dr. Seuss's *How the Grinch Stole Christmas*, Gustaf Tenggren's illustrations for *The Poky Little Puppy*, and Maurice Sendak's *Where the Wild Things Are*. Revisit these well-known books in terms of subject matter, characters, design, and style, and compare them with newer treatments of gender, race, and ethnicity in children's literature. The curator of the Kerlan collection describes, shows slides, and shares picture books, even original art from some of them. Books discussed include those recognized for distinguished art awards, such as the Caldecott Award and the *New York Times* Best Illustrated Books. (Limited to 20)

Fall Spec Term, ★Sec 1, T, 6:30-8:30, Sept. 26-  
Oct. 17 (4 meetings), WaLib 109. *No late fee through Sept. 19.*

*(Karen Nelson Hoyle is a University of Minnesota professor and longtime curator of the University's Children's Literature Research Collection. She has also served on both the Caldecott Award Committee and the Newbery Committee for distinguished children's literature)*

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★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

## NATURAL AND PHYSICAL SCIENCES

### Ecosystems/Ecology

**CSch 0500 BIODIVERSITY: WHAT IS IT AND WHY IS IT IMPORTANT?** No credit, \$65 (age 62 and Bell Museum members, \$58.50)

Ever since the Brazil Earth Summit in 1992, biodiversity has captured the attention of the media and heads of states and corporations, and revitalized environmental activism worldwide. But what really is biodiversity and why is it important? Learn about biodiversity from the species level to the ecosystem level, and about concepts such as ecological integrity and ecological health. Consider the pragmatic and ethical reasons given to preserve biodiversity by citizens, governments, and corporations, and discuss issues such as the appropriateness of the "utility" argument in tropical but not temperate regions. Then examine what is now being done to protect biodiversity nationally and globally, the problems inherent in measures such as parklands or preserves, and possible legal and policy options for the future. (Offered in cooperation with the Bell Museum of Natural History. Limited to 25)

Winter Spec Term, ★Sec 1, W, 6:30-8:30, Jan.

17-Feb. 14 (5 meetings), BellMus 175 (use auditorium entrance facing Church Street). *No late fee through Jan. 10.*

*(Stuart A. Nicholson is an ecologist/environmental scientist with a background in law and management. Much of his ecological research has entailed determining, measuring, and interpreting biological diversity in various settings. He recently completed a book on business environmental responsibility that links business activities with ecological concerns)*

### Organisms/Behavior/Taxonomy

**CSch 0516 NATURE IN PEN AND INK: TECHNIQUES IN NATURAL HISTORY DRAWING.** No credit, \$118 plus \$10 special fee. Total \$128 (age 62 and Bell Museum members, \$106.20 plus \$10 special fee. Total \$116.20).

Observe the natural world through the critical eyes of an artist and transform your appreciation of nature into creative images. Designed for people who have some drawing experience and want to experiment with pen and ink. Examine a variety of techniques and mediums used by natural history artists and illustrators. Sharpen your drawing skills using the rich source of subject material at the Bell Museum and during one half-day Saturday field trip

(date and time arranged; participants provide own transportation and may choose to carpool).

Students supply basic drawing materials (the \$10 special fee is needed to cover specialized materials). (Offered in cooperation with the Bell Museum of Natural History. Limited to 20)

Winter Spec Term, ★Sec 1, M, 6:30-8:30, Jan.

22-Feb. 26 (6 meetings plus field trip),

BellMus 3 (use auditorium entrance facing Church Street). *No late fee through Jan. 15.*

*(Don Luce, a curator of natural history art, researches, designs, and produces exhibits for the Bell Museum at the University of Minnesota. He also does scientific illustrations and fine art. He has a research interest in the history of scientific illustration and has written a book and several articles on the life and art of Francis Lee Jaques)*

**CSch 0521 WHERE ARE THEY NOW? NATIVE ANIMALS OF THE METROPOLITAN REGION.** No credit, \$70 (age 62 and Bell Museum members, \$63).

The landscape of the Twin Cities metropolitan area has undergone tremendous change since Euro-Americans settled here 150 years ago. The mammals, birds, reptiles, and other animals native to this region have also changed significantly. Some, such as the passenger pigeon and bison, are gone completely. Others, like the Blanding's turtle and plains pocket mouse, have become quite rare. Still others, including white-tailed deer and raccoon, appear to have adapted well to urban and suburban environments. Discuss some of the animals native to the metropolitan area and the impact of development on them, and identify areas that remain as important refuges to their continued existence in the region. Includes a full-day Saturday field trip to local areas where native animals are likely to be observed (Sept. 30; participants provide own transportation and may choose to carpool). (Offered in cooperation with the Bell Museum of Natural History. Limited to 25)

Fall Spec Term, ★Sec 1, Th, 7-8:30, Sept. 21-

Oct. 5 (3 meetings plus field trip), BellMus 175 (use auditorium entrance facing Church Street). *No late fee through Sept. 14.*

*(Gerda Nordquist coordinates animal surveys for the Minnesota County Biological Survey at the Department of Natural Resources, including distribution and status of rare animals in the metropolitan counties. She is a doctoral candidate in the Department of Ecology, Evolution, and Behavior at the University of Minnesota)*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

**CSch 0522 CONSERVATION OF ASIAN TIGERS: THE BIOLOGY AND THE POLITICS.**

No credit, \$58 plus \$10 special fee. Total \$68 (age 62 and Minnesota Zoo members, \$52.20 plus \$10 special fee. Total \$62.20).

The tiger has intrigued humankind since the beginning of civilization, but now these powerful yet secretive members of the feline family face extinction due to habitat destruction and poaching. Examine the unique adaptations of tiger species (e.g., habitat preference, social structure, and predatory specializations). Explore such modern conservation strategies as captive breeding programs, species survival plans, and habitat preservation helping to preserve these magnificent carnivores. Includes a behind-the-scenes look at the Minnesota Zoo's tiger exhibit. (Offered in cooperation with the Minnesota Zoo. Limited to 20)

Fall Spec Term, ★Sec 1, Sa, 9 a.m.-12:30, Dec. 2, 9 (2 meetings), Minnesota Zoo, 13000 Zoo Blvd., Apple Valley (meet in lobby). *No late fee through Nov. 24.*

*(Ron Tilson is director of the conservation office at the Minnesota Zoo and coordinator of the Global Animal Survival Plan for tigers. He is an associate professor of conservation biology and wildlife and fisheries at the University of Minnesota. Nick Reindl is curator of the Northern Trail at the Minnesota Zoo. He has 17 years' experience managing captive tigers. Kathy Traylor-Holzer is a conservation biologist at the Minnesota Zoo)*

**CSch 0523 THE WOLF: BACK FROM THE BRINK OF EXTINCTION.** No credit, \$58 plus \$10 special fee. Total \$68 (age 62 and Minnesota Zoo members, \$52.20 plus \$10 special fee. Total \$62.20).

Of all North American species, the wolf is perhaps the most feared and misunderstood. In the lore of many civilizations *Canis lupus* is described as a relentless predator, a hungry enemy that hunts in packs instilling terror in its prey. Since the arrival of European settlers the wolf has been removed from over 99 percent of its range. Fortunately, with a new drive to conserve the species, the wolf is making a comeback—but not without controversy. Examine the natural history of the wolf, how wolves communicate, and why a social hierarchy helps maintain strong pack ties. Learn about recent conservation efforts as well as canine behavior in zoo settings. (Offered in cooperation with the Minnesota Zoo. Limited to 20)

Winter Spec Term, ★Sec 1, Sa, 9 a.m.-12:30, Feb. 3, 10 (2 meetings), Minnesota Zoo, 13000 Zoo Blvd., Apple Valley (meet in lobby). *No late fee through Jan. 26.*

*(Jackie Fallon is the wolf keeper at the Minnesota Zoo and also a wildlife educator at the Gabbert Raptor Center at the University of Minnesota. Steve Hage is the conservation education specialist at the Minnesota Zoo and a doctoral candidate in conservation biology at the University)*

**CSch 0525 MARINE MAMMALS: BIOLOGY AND BEHAVIOR.** No credit, \$58 (age 62 and Minnesota Zoo members, \$52.20).

Of all animals, few are held in as much awe as those that live in the sea, particularly cetaceans (e.g., whales, dolphins, and porpoises). Explore the unique adaptations of marine mammal groups including social organization, behavior, and learning. Enjoy playful bottle-nose dolphins during a behind-the-scenes tour with the Minnesota Zoo's dolphin trainers. (Offered in cooperation with the Minnesota Zoo. Limited to 20)

Spring Spec Term, ★Sec 1, Sa, 9 a.m.-12:30, June 1, 8 (2 meetings), Minnesota Zoo, 13000 Zoo Blvd., Apple Valley (meet in lobby). *No late fee through May 24.*

*(Brian Joseph, D.V.M., is director of biological programs at the Minnesota Zoo)*

**CSch 0527 BIRDS OF PREY: THEIR BIOLOGY AND ECOLOGY.** No credit, \$90 (age 62 and Bell Museum members, \$81).

Birds of prey have a long history of association with humans: through falconry, as competitors for the same food, and currently as indicators of environmental problems. Concentrating on but not limited to North America, this course provides an overview of identification, distribution, physiology, and natural history of owls, hawks, and eagles. Learn about falconry, rehabilitation, captive breeding, and reintroduction. Includes a tour of the Gabbert Raptor Center and a field trip to Hawk Ridge near Duluth (Oct. 21; participants provide own transportation and may choose to carpool). (Offered in cooperation with the Bell Museum of Natural History. Limited to 35)

Fall Spec Term, ★Sec 1, T, 6:30-8:30, Oct. 17-19, Nov. 7 (4 meetings plus field trip), GRaptCtr 120, StP Campus. *No late fee through Oct. 10.*

*(Mark Martell, a staff member of the Gabbert Raptor Center since 1981, has an M.S. in wildlife conservation from the University of Minnesota. He is a falconer and has done field work with bald eagles, burrowing owls, osprey, and peregrine falcons)*

## Noncredit Courses

### **CSch 0528 EAGLES: THEIR NATURAL HISTORY AND PLACE AS A CULTURAL ICON.**

No credit, \$76 (age 62 and Bell Museum members, \$68.40).

Explore the natural history and biology of eagles, with a special focus on the bald eagle and golden eagle in North America. Examine the cultural uses that eagles serve around the world. Includes observation of live eagles from the Gabbert Raptor Center and an all-day Saturday field trip to view eagles wintering along the Mississippi River (**Mar. 9; participants provide own transportation and may choose to carpool**). (Offered in cooperation with the Bell Museum of Natural History. Limited to 25) Winter Spec Term, ★Sec 1, W, 6:30-8:30, Mar.

6-20 (3 meetings plus field trip), GRaptCtr

120, StP Campus. *No late fee through Feb. 28.*

(*See Mark Martell's biography in CSch 0527*)

### **CSch 0529 INTRODUCTION TO ORNITHOLOGY: NATURAL HISTORY, ECOLOGY, AND IDENTIFICATION OF MINNESOTA'S COMMON BIRDS.**

No credit, \$102 (age 62 and Bell Museum members, \$91.80).

For novices and people who would like to learn more about basic bird biology and identification. Classroom sessions cover biological topics such as migration, reproduction, and behavior, as well as identification of major bird groups and the 100 or so most common birds in Minnesota. Three local Saturday morning field trips (**Mar. 30, Apr. 6, 20; participants provide own transportation and may choose to carpool**) allow students to use and improve their bird identification skills primarily with early migrant birds such as waterfowl, raptors, and sparrows. Binoculars and a field guide (preferably the National Geographic guide) are essential. (Offered in cooperation with the Bell Museum of Natural History. Limited to 20)

Spring Spec Term, ★Sec 1, W, 6:30-8:30, Mar.

27-Apr. 17 (4 meetings plus 3 field trips),

Ecology 150, StP Campus. *No late fee through Mar. 20.*

(*Adam J. Fry is a doctoral candidate in zoology at the University of Minnesota studying the evolutionary relationships of woodpeckers. He has taught bird identification classes for the Rhode Island Audubon Society and is the author of a bird-finding guide to Rhode Island*)

### **CSch 0530 INTERMEDIATE ORNITHOLOGY: IDENTIFICATION AND BIOLOGY OF MINNESOTA BIRDS.**

No credit, \$145 (age 62 and Bell Museum members, \$130.50).

The bulk of Minnesota's spring songbird migration occurs in May, which is an excellent time to sharpen bird identification skills. This course is designed for those with some experience in bird identification (such as participation in CSch 0529). Four classroom sessions cover aspects of bird migration, breeding biology, song, and ecology, as well as identification of some of the more difficult groups such as warblers, shorebirds, and sparrows. Four local Saturday morning field trips (**May 4, 11, 18, 25**) and one all-day Saturday field trip to Crex Meadows, Wis., (**June 1**) concentrate on identification of a variety of species by both sight and sound (**participants provide own transportation and may choose to carpool on field trips**). Binoculars and a field guide are essential. (Offered in cooperation with the Bell Museum of Natural History. Limited to 20)

Spring Spec Term, ★Sec 1, W, 6:30-8:30, May 1-

29 (4 meetings plus 5 field trips—no class May

22), Ecology 150, StP Campus. *No late fee*

*through Apr. 24.*

(*Bruce A. Fall is assistant to the director in the General Biology Program at the University of Minnesota. He also organizes and leads ornithology field trips for the Bell Museum*)

### **CSch 0536 FALL WILDFLOWERS AND GRASSES OF MINNESOTA.**

No credit, \$120

(age 62 and Bell Museum members, \$108).

Fall offers new challenges to wildflower enthusiasts as asters and goldenrods bloom abundantly in prairies, open woods, and wetlands. Explore and study the beautiful autumn plant life of central Minnesota through lectures, slides, and field trips. Learn to distinguish asters, goldenrods, and grasses using field guides and simple keys. Sharpen identification skills during two Saturday field trips (**all day Sept. 23, half day Oct. 21; locations dependent on where plants are in bloom; participants provide own transportation and may choose to carpool**). (Offered in cooperation with the Bell Museum of Natural History. Limited to 25)

Fall Spec Term, ★Sec 1, T, 6-8, Sept. 19-Oct. 31

(5 meetings plus 2 field trips—no class Oct. 3,

24), BioSci 163, StP Campus. *No late fee*

*through Sept. 12.*

(*C. Colston Burrell is a landscape designer, consultant, writer, and photographer. He has M.S. degrees in horticulture and landscape architecture, and a lifelong interest in the growing and propagation of native plants. His design business, Native Landscape Design and Restoration, Ltd., promotes the integration of natural and cultural systems*)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

**CSch 0537 A CELEBRATION OF THE SEASON: SPRING WILDFLOWERS OF MINNESOTA.** No credit, \$120 (age 62 and Bell Museum members, \$108).

With winter's snow barely melted, native wildflowers begin blooming in a wide and wonderful array of color and form. Enjoy the blossoming of spring in Minnesota through the wildflowers of woodland, prairie, and bog. Evening sessions introduce the diversity of wildflowers found in the state and how to identify them using field guides and simple keys. Two half-day Saturday field trips (**Apr. 27, May 4**) and one full-day Saturday field trip (**May 18**) enable you to test your botanical skills in three flower-rich areas (**locations dependent on conditions; participants provide own transportation and may choose to carpool**). (Offered in cooperation with the Bell Museum of Natural History. Limited to 25)

Spring Spec Term, ★Sec 1, T, 6:30-8:30, Apr.

23-May 14 (4 meetings plus 3 field trips),

BellMus 175 (use auditorium entrance facing Church Street). *No late fee through Apr. 16.*

(See C. Colston Burrell's biography in CSch 0536)

**CSch 0539 SPICES, HERBS, AND MEDICINAL PLANTS.** No credit, \$65 (age 62, \$58.50).

Parsley, sage, rosemary, and thyme! Supermarkets display well over 50 spices and herbs, but we use few of them mainly out of ignorance of their use or lack of imagination. Wars have been fought over spices, and their lure has prompted explorations leading to the discovery of new lands. Study the plants that produce these seasonings, the roles they have played in history, their present day usage, and their medicinal properties. Includes a visit to the Como Conservatory to view and study many of these plants.

Fall Spec Term, Sec 1, M, 6:15-8:15, Nov. 6-27

(4 meetings), HckrH 100, StP Campus. *No late fee through Oct. 30.*

(*Brother Thomas Sullivan, F.S.C., a doctoral candidate in plant biology at the University of Minnesota, is president of the Christian Brothers of the upper midwestern United States. He has more than 20 years of teaching experience and a lifelong interest in economic botany*)

## Cellular/Genetics

**CSch 0540 BRAIN AND MIND.** No credit, \$65 (age 62, \$58.50).

Begin to understand one of your body's most complex and mysterious organs, the brain. Learn how cells within the brain communicate with each other, which allows you to perceive and interact with the world around you. Examine how parts of the brain differ from each other in structure and function, especially the differences between the right and left halves. Explore the relationships between the parts of the brain and the physiological processes currently believed to be essential for the complex functions of attention, learning, and memory. (Limited to 30)

Winter Spec Term, ★Sec 1, M, 6:30-8:30, Jan.

22-Feb. 12 (4 meetings), Mpls campus. *No late fee through Jan. 16.*

(*John Pellegrini is an assistant professor of biology at the College of St. Catherine*)

## Geology

**CSch 0550 DRIFTING CONTINENTS/EXPANDING OCEANS: AN INTRODUCTION TO THE DYNAMIC EARTH.** No credit, \$65 (age 62, \$58.50).

Although geology is truly an ancient science, our understanding of the forces and processes that have shaped the earth over its 4.5-billion-year history is a recent revelation. Learn about milestones in geologic thought that ultimately led to the breakthrough theory of plate tectonics just 30 years ago, and how this unifying theory explains the ever-changing landscape of the Earth's surface and the diversity of life that inhabits it. Learn why the Himalayas are the highest mountains in the world, why the Pacific Ocean is surrounded by volcanos called the "ring of fire," and why California is so prone to earthquakes and Minnesota is not. (Limited to 30)

Winter Spec Term, ★Sec 1, Th, 6:30-8:30, Jan.

18-Feb. 8 (4 meetings), Minnesota Geological Survey, 2642 University Ave., StP. *No late fee through Jan. 11.*

(*Jim Miller received his Ph.D. from the University of Minnesota and is a senior geologist at the Minnesota Geological Survey. He specializes in the billion-year-old geology of the Lake Superior region*)

## Noncredit Courses

**CSch 0551 MINNESOTA GEOLOGY: 3.6 BILLION YEARS AND COUNTING.** No credit, \$190 (age 62, \$171).

Discover where volcanoes erupted onto a lifeless landscape, where an inland sea teemed thick with algae, where a mountain chain rose to unrivaled heights, where a great valley was filled with lakes of lava, where oceans lapped against white sand beaches, and where mile-thick ice caps slowly carved a new landscape. Discover the long, diverse, and often calamitous geologic history of Minnesota. Includes two full-day field trips, one to the Minnesota River Valley (**Saturday, Apr. 27**) and another to local areas (**Saturday, May 11**), plus a weekend trip to northeastern Minnesota (**May 3-5**) that involves one to two nights camping in state parks (**additional cost of about \$15 for group meals and camping fees for weekend trip. Participants may also choose to stay in a motel at own expense. Participants provide own camping equipment and transportation and may choose to carpool.**) (Limited to 25)

Spring Spec Term, ★Sec 1, Th, 6:30-8:30, Apr.

18-May 9 (4 meetings plus 3 field trips),

Minnesota Geological Survey, 2642 University Ave., StP. *No late fee through Apr. 11.*

(See Jim Miller's biography in CSch 0550)

## Physical Sciences

**CSch 0560 QUARKS TO QUASARS: AN OVERVIEW OF 20TH-CENTURY PHYSICS.** No credit, \$135 (age 62, \$121.50).

From the theory of relativity to superstring theory, the discoveries of this century have dramatically altered our understanding of the physical world. This introductory overview of the physics and cosmology of the 20th century will include relativity, the big bang, quantum theory, atomic and elementary-particle physics, and modern unification theories. There will also be a discussion of how modern physics has influenced our lives and changed our view of the world. Demonstrations and visual aids will illustrate lectures. Emphasis will be on a qualitative and conceptual understanding of the ideas and concepts of modern physics. No background in math or physics is required. Students are asked to purchase one textbook. (Limited to 40)

Fall Spec Term, ★Sec 1, Th, 6:30-8:30, Oct. 5-

Nov. 16 (7 meetings), Phys 210. *No late fee through Sept. 28.*

(Roger S. Jones is an associate professor of physics at the University of Minnesota. His books, *Physics as Metaphor* and *Physics for the Rest of Us* [text for the course], deal with the metaphorical and idolatrous character of science while explaining the major concepts of modern physics)

**CSch 0563 AN INTRODUCTION TO THE MAGNIFICENT WORLD OF MOLECULES.** No credit, \$72 plus \$5 course fee. Total \$77 (age 62, \$64.80 plus \$5 course fee. Total \$69.80).

Most molecules are so small that it's impossible to see them unless they are present in unimaginably large numbers. They are in the air we breathe, the colors we see, the aromas we smell, the food we taste, the clothes we wear—in fact, they are us. Through demonstrations, models, and hands-on laboratory exercises, uncover the connection between the nature of molecules and properties such as flexibility, hardness, and stickiness. If you've never had a high school or college chemistry course, or have forgotten much of what you learned, this course offers an interesting and nonthreatening way to learn about the smallest molecules such as water and dioxygen and also the ozone, freons, and sulfur oxides of air pollution fame. Stretch your imagination to understand more about the huge "designer" molecules that we call plastics or polymers, substances formed when thousands of small molecules combine into giant ones. The results of these formations are useful products like nylon, polyester, teflon, polyethylene, plexiglass, PVCs, and many other materials of our so-called age of plastics. Explore some interesting chemistry topics and properties in a comfortable learning environment. (Limited to 20)

Spring Spec Term, ★Sec 1, Th, 6:30-8:30, Apr.

11-May 2 (4 meetings), SciCB 325. *No late fee through Apr. 4.*

(Barbara Edgar has a doctorate in inorganic chemistry and is the coordinator of the introductory chemistry program at the University of Minnesota)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

**CSch 0565 LASER—THE LIGHT FANTASTIC!** No credit, \$65 (age 62, \$58.50).

Lasers are used almost everywhere today. You can find them in range finders in cameras, product scanners in grocery and department stores, lecture pointers, and surgical instruments. They are used in processes like cutting, welding, engraving, printing, and communications. Learn about the fundamental science behind lasers as well as the various types, properties, uses, safety issues, and more. Lectures and lively discussion are augmented by laser demonstrations. No background in physics or calculus is required. Knowledge of general math is helpful, but not essential. (Limited to 30)

Spring Spec Term, ★Sec 1, Th, 6:30-8:30, Apr. 11-May 2 (4 meetings), EE/CSci 3111. *No late fee through Apr. 4.*

*(Greg Mowry, currently working in product development at Seagate Technology, is a doctoral candidate in laser optics at the University of Minnesota. He completed master's degrees in analog electronics at Stanford and in metallurgy at Iowa State University)*

**Mathematics****CSch 0570 THE SCIENCE OF CHAOS: A NEW WINDOW ON BOTH THE ORDINARY AND THE FANTASTIC.** No credit, \$78 (age 62, \$70.20).

During the past 30 years, an entirely new mathematical discipline has arisen that is radically changing the way we view the world, from the beating of the human heart to the ever-changing weather. A new vocabulary is being invented: fractals, self-similarity, strange attractors, chaos. Many of the basic concepts and most of the real-world examples of mathematical chaos are readily accessible to the nonspecialist. This course is for those who want to see the beauty of the world with different eyes as well as for those who just want to get in on some of the fun. Household objects and computer demonstrations are used to help everyone discover patterns of chaos for themselves. Includes opportunity for hands-on experimentation with computer simulations. Recommended texts include *Exploring Chaos* by Nina Hall (nontechnical) and *A First Course in Chaotic Dynamical Systems* by Robert Devaney (technical). (Limited to 35)

Spring Spec Term, ★Sec 1, W, 6:30-8:30, Apr. 10-May 1 (4 meetings), EE/CSci 2260. *No late fee through Apr. 3.*

*(Larry Gray is a mathematics professor at the University of Minnesota. His research concerns mathematical models of systems that contain a large number of randomly interacting components, ranging from ecological models to systems of subatomic particles)*

**Environment/Public Policy****CSch 0580 BLACK RHINOS, ROSY PERIWINKLES, AND MINNESOTA TROUT LILIES: UNDERSTANDING ENDANGERED SPECIES ISSUES.** No credit, \$65 (age 62 and Bell Museum members, \$58.50).

It has been projected that nearly 17 percent of the species in tropical rain forests could become extinct over the next 30 years. What is the situation in Minnesota? This overview of endangered species issues goes beyond the numbers and who's who on the endangered species lists to explore geographical patterns of genetic diversity, historical patterns of extinction, and concepts of rarity. Visit and discuss the Bell Museum's new "Endangered Species" exhibit. Consider avenues for protection of endangered species and your own values about endangered species. Examine concerns ranging from the biological to the socio-political, and receive a list of optional recommended readings that includes articles from both sides of the public debate about the relationship between endangered species, economics, and private property rights. (Offered in cooperation with the Bell Museum of Natural History. Limited to 25)

Fall Spec Term, ★Sec 1, T, 6:30-8:30, Oct. 10-31 (4 meetings), BellMus 175 (use auditorium entrance facing Church Street). *No late fee through Oct. 3.*

*(Nancy Sather is a botanist/plant ecologist with the Natural Heritage and Nongame Research Program of the Minnesota Department of Natural Resources. Her responsibilities include coordination of the federal endangered plant projects. She holds an M.S. degree from the Department of Ecology and Behavioral Biology at the University of Minnesota)*

## Noncredit Courses

**CSch 0583 SCIENCE OR PSEUDOSCIENCE? EXAMINING THE DIFFERENCE.** No credit, \$65 (age 62, \$58.50).

What distinguishes pseudoscience and quackery from "true" science and medicine? Dozens of alternative or complementary scientific theories and medical therapies are now vying for our attention. Some of these may be false or fraudulent, others legitimate. How can the layperson sort the wheat from the chaff? Explore these questions from a historical perspective with examples from herbal medicine, acupuncture, electrotherapy, mesmerism, light therapy, phrenology, parapsychology, and cold fusion. Held at The Bakken Library and Museum of Electricity in Life, where antique instruments and rare books illustrate historical examples. (Limited to 25)

Spring Spec Term, ★Sec 1, T, 6:15-8:15, Apr. 2-23 (4 meetings), The Bakken Library and Museum, 3537 Zenith Ave S., Mpls. *No late fee through Mar. 26.*

*(David Rhees, executive director of The Bakken Library and Museum of Electricity in Life, holds a doctorate in the history and sociology of science. He has been a visiting professor in the University of Minnesota's History of Science and Technology Program)*

**CSch 0585 RESURGENCE OF AN OLD ENEMY: UNDERSTANDING NEW AND EMERGING INFECTIOUS DISEASES.** No credit, \$65 (age 62, \$58.50).

Popular books such as *The Hot Zone* and *The Coming Plague* have highlighted new and emerging infectious diseases in the U.S. and other parts of the world. We once thought antibiotics were the answer to many infectious diseases, but science is now being challenged by microbes such as HIV/AIDS, Ebola virus, hantavirus, "flesh-eating bacteria," Legionnaires' disease, and tuberculosis. Just how safe is the air we breathe, the water we drink, and the food we eat? Is there any hope of protection? Can these diseases be cured? Examine the biology, history, and current status of some of these diseases to understand which are real public health threats and which are not. Includes an overview of the basic biology of viruses and bacteria. General information designed for those with limited, nonmedical science backgrounds. (Limited to 30)

Spring Spec Term, ★Sec 1, T, 6:30-8:30, Apr. 23-May 14 (4 meetings), AkerH 215. *No late fee through Apr. 16.*

*(Kristen Hoikka Pritchard has a master's degree in microbiology-immunology from Northwestern University and is completing her doctorate in microbiology from the University of Minnesota. Her doctoral research is on expression of virulence in Streptococcus pyogenes)*

**CSch 0587 ASIAN MEDICINE: ALTERNATIVE WAYS OF KNOWING.** No credit, \$80 (age 62, \$72).

Have you ever experienced the energy of qigong, the channels of acupuncture, or the benefits of Chinese herbal medicine? Although Western medicine is very effective for many diseases, it is just one way of understanding illness, structuring a doctor-patient relationship, and rationalizing a medical response. In traditional Chinese medicine the body consists of channels of energy; treatment entails opening up blocks in this complex web of channels and reestablishing balance. Since patients in Chinese medicine are expected to monitor subtle changes in their body, they are given more agency over their treatment than in the West. Learn about the most recent anthropological and historical scholarship on Chinese medicine, and about medical therapies in other countries in Asia. For people who have thought about but not yet tried alternative medicine and those who have used Asian medical therapies but would like a thorough introduction. Includes lectures and demonstrations on qigong, tai chi, and acupuncture. (Limited to 30)

Fall Spec Term, ★Sec 1, M, 6:30-8:30, Oct. 2-30 (5 meetings), Lutheran Church of the Good Shepherd, 4801 France Ave. S., Edina (park in and enter from south lot). *No late fee through Sept. 25.*

*(Marta Hanson, a Ph.D. candidate in the Department of the History and Sociology of Science at the University of Pennsylvania, spent three years in the People's Republic of China studying the history of Chinese medicine. Her dissertation is on the traditional Chinese medical response to epidemic diseases before the modern conception of germ theory)*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.



## ACADEMIC SKILLS AND CAREER DEVELOPMENT

### FREE LIBRARY COURSE: DEMYSTIFYING THE ELECTRONIC LIBRARY

Sometime (maybe many times) in your college career you will need to use the library. Get acquainted with the resources of the University of Minnesota Libraries—the largest library system in the state—in this free noncredit course. Discover and search online library catalogs and periodical indexes that describe books and articles. Learn how to search for information on the Internet using Gopher and other resources. **This three-session course is limited to current University of Minnesota credit students.** Call 626-8787 to reserve your spot. Make reservations for fall beginning Aug. 1; winter, Nov. 1; spring, Feb. 1. Instructors for this course are University librarians. (Presented by University of Minnesota Libraries and Continuing Education and Extension/University College. Limited to 30)

Fall Spec Term, ★Sec 1, Th, 6:30-8:30, Oct. 12-26 (3 meetings), Carlson School of Management Conference Center 180A.

Winter Spec Term, ★Sec 2, T, 6:30-8:30, Jan. 16-30 (3 meetings), Carlson School of Management Conference Center 180A.

Spring Spec Term, ★Sec 3, Th, 6:30-8:30, Apr. 11-25 (3 meetings), Carlson School of Management Conference Center 180A.

### NAVIGATING THE UNIVERSITY

Welcome to the University! Learn your way around this big, friendly "city," separate myths from reality, and discover opportunities for education, work, and life. With a little orientation, you can use the "U" to its fullest. Where do I park? Where are the libraries and how do I use them? Do I get an e-mail address? What is a college? What degrees can I earn at night? When are recreational facilities available? Where can I get advising? This free evening session is planned to answer your questions, help you understand the "U" and how it is organized, and show you how to take advantage of this great resource. Learn tips that can help you be a successful adult learner. Call 626-8787 to reserve your spot. Make reservations for fall beginning Aug. 1; spring, Feb. 1. (Presented by the Departments of Counseling and Extension Classes of Continuing Education and Extension/University College. Limited to 50)

Fall Spec Term, ★Sec 1, T, 6:30-8:30, Sept. 12 (1 meeting), NCCCE 140.

Fall Spec Term, ★Sec 2, T, 6:30-8:30, Dec. 12 (1 meeting), NCCCE 140.

Spring Spec Term, ★Sec 3, T, 6:30-8:30, Mar. 12 (1 meeting), NCCCE 140.

### Skills/Test Taking

**PSch 0600 POSITIVE PATHS TO LEARNING: OVERCOMING EMOTIONAL BLOCKS TO ACADEMIC SUCCESS.** No credit, \$63 (age 62, \$46.80).

Have you thought about returning to school to finish a college degree or to complete additional professional training, but feel blocked by anxiety or lack of confidence about your academic abilities? Explore the sources of these emotional barriers to academic success and learn how to overcome them. Gain skills to modify personal belief systems, use positive self-talk, manage anxiety, and overcome difficult learning histories. (Limited to 20)

Fall Spec Term, ★Sec 1, T, 6:30-8:30, Oct. 10-24 (3 meetings), Eddy H 102. *No late fee through Oct. 3.*

(Glenn Hirsch is a licensed psychologist in private practice and a senior staff psychologist at University Counseling and Consulting Services)

**PSch 0603 FINDING A COLLEGE THAT FITS: HELPING YOUR CHILD MAKE CHOICES.** No credit, \$27 (age 62, \$24.30).

Do you find yourself perplexed by the almost bewildering array of college possibilities that your college-bound student faces? This course aims to provide parents and guardians with an understanding of the college admissions process, information on resources, some important inside tips, and the confidence to be an active participant in a vital part of their child's transition to adulthood. More specifically, information will be provided about what colleges look for from students; finding out about colleges; matching oneself to a college; applying for financial aid; and a college admissions planning calendar. Also, two representatives, one from a public and the other from a private institution, will discuss the advantages of attending their type of college. (Limited to 50)

Fall Spec Term, ★Sec 1, T, 6-9, Oct. 10 (1 meeting), NCCCE Library. *No late fee through Oct. 3.*

Spring Spec Term, ★Sec 2, Sa, 9-12, Apr. 13 (1 meeting), NCCCE 229. *No late fee through Apr. 5.*

(Clifford J. Caine, Ph.D., is an author [How to Get Into College] and an educational consultant. He was previously director of men's residence halls and the student union at Macalester College, assistant headmaster of St. Paul Academy and Summit School, and director of student services and college counseling at Breck School)

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## Noncredit Courses

**PSch 0604 HOW TO GET INTO COLLEGE.** No credit, \$27 (age 62, \$24.30).

Are you a high school student concerned about how, when, and where you are going to college? Learn a step-by-step approach to the college process that answers these questions: What are colleges looking for? When should I apply and how do I do it? What are my chances? Complete easy-to-use worksheets for self-evaluation, personal data, college data, college evaluation, and financial aid requests. Receive a three-year calendar and a checklist of events so that important deadlines will be met efficiently from your sophomore through senior years. Finally, discuss good techniques for interviewing and writing college essays. An expert on college entrance exams discusses SAT and ACT tests. (Limited to 50)

Winter Spec Term, ★Sec 1, Sa, 9 a.m.-12, Jan. 27 (1 meeting), NCCE 229. *No late fee through Jan. 19.*

(See Clifford J. Caine's biography in PSch 0603)

**PSch 0605 DECIDING TO ATTEND GRADUATE SCHOOL.** No credit, \$18 (age 62, \$16.20).

The decision to pursue a graduate degree can be difficult and involves assessing the value of a graduate degree to you as well as selecting an appropriate program. Explore the impact of attending graduate school on both your professional and personal life. Clarify your life/career goals, evaluate your options, and develop a plan of action. Includes discussion of factors to consider and questions to ask in researching possible graduate programs. (Limited to 25)

Fall Spec Term, ★Sec 1, Sa, 10 a.m.-12, Sept. 30 (1 meeting), AmundH 116. *No late fee through Sept. 22.*

Spring Spec Term, ★Sec 2, Sa, 10 a.m.-12, Mar. 30 (1 meeting), AmundH 120. *No late fee through Mar. 22.*

(Lisa Thomas is a career management consultant at Career Dynamics, Inc. She has a doctorate in counseling psychology with an emphasis on career development from Ohio State University, and was previously assistant director of Michigan State University's Career Development and Placement Services)

**PSch 0606 APPLYING TO AND FINANCING GRADUATE SCHOOL.** No credit, \$28 (age 62, \$25.20).

Early planning is essential in applying to and successfully financing your graduate education. Many application deadlines are six months or more before the term begins. The first part of this session examines how the graduate school admission process works, when to apply, and how to put together an effective application. In the second half find out what types of aid and financial support are available including loans, grants, scholarships, fellowships, and assistantships. Includes time for questions. (Limited to 35)

Fall Spec Term, ★Sec 1, Sa, 9 a.m.-12, Sept. 16 (1 meeting), AmundH 124. *No late fee through Sept. 8.*

Fall Spec Term, ★Sec 2, Sa, 9 a.m.-12, Oct. 21 (1 meeting), AmundH 120. *No late fee through Oct. 13.*

Spring Spec Term, ★Sec 3, Sa, 9 a.m.-12, Apr. 13 (1 meeting), AmundH 120. *No late fee through Apr. 5.*

(Dennis Clayton, Ph.D., is assistant to the dean of the Graduate School at the University of Minnesota. Larry Bloom is a financial aid counselor at the University)

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★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

**SAVE TIME—CHOOSE THE RIGHT MATH REVIEW COURSE**

Wondering if you need more math review (perhaps PSch 0609 Reviewing Math for the GRE or GMAT or an earlier entry course) before taking PSch 0610 Preparing for the GRE or PSch 0611 Preparing for the GMAT? To make your decision easier, a short self-scored test is available at no cost. Guidelines included with the test help you decide which class you are ready for based on your score. To have the test mailed to you, call 624-5267.

**PSch 0609 REVIEWING MATH FOR THE GRE OR GMAT.** No credit, \$132 plus \$12 special fee. Total \$144 (age 62, \$118.80 plus \$12 special fee. Total \$130.80). *Includes study materials.*

Preparation for the mathematics portions of the Graduate Record Examination (GRE) and the Graduate Management Admission Test (GMAT). Intended for people who need to brush up on their basic math skills and who would like some guidance and practice in solving the fundamental problems encountered on the GRE and GMAT. Topics include material from arithmetic, algebra, geometry, and problem solving (see also PSch 0610, 0611, 0661, 0662, or 0663). Last class includes an assessment followed by a discussion. Materials distributed at first class. (See math review note above. Limited to 30)

Fall Spec Term, ★Sec 1, M, 6-9, Oct. 23-Nov. 13 (4 meetings), ClaOff B36, StP Campus. *No late fee through Oct. 16.*

Winter Spec Term, ★Sec 2, M, 6-9, Feb. 12-Mar. 4 (4 meetings), ClaOff B25, StP Campus. *No late fee through Feb. 5.*

Spring Spec Term, ★Sec 3, M, 6-9, Apr. 29-May 20 (4 meetings), ClaOff B30, StP Campus. *No late fee through Apr. 22.*

*(Barbara Clothier is the mathematics counselor at Macalester College as well as an instructor of both mathematics and statistics. Her research interests are in educational psychology and developmental mathematics education)*

**PSch 0610 PREPARING FOR THE GRE.** No credit, \$260 plus \$25 special fee. Total \$285 (age 62, \$234 plus \$25 special fee. Total \$259). *Includes study materials.*

Become familiar with the various types of verbal, quantitative, and analytical questions presented on the Graduate Record Examination (GRE) General Test. Learn test-taking strategies and work with test-simulation exercises on reading comprehension, antonyms, analogies, sentence correction, problem solving, quantitative comparison, graphs, and analytical/logical reasoning. Includes advanced math strategies. Students needing basic math review (arithmetic, algebra, geometry, and story problems) should register for PSch 0609. First class session is a proctored diagnostic exam and distribution of materials especially prepared for this seminar format as well as the practice book GRE: *Practicing to Take the General Test*. Instruction begins at second session. (See math review note above. Limited to 40)

Fall Spec Term, ★Sec 1, MW, 5:30-9:30, Sept. 6, 13, 18, 20, 25, 27 (6 meetings—no class Sept. 11), HckrH 210, StP Campus. *No late fee through Aug. 30.*

Fall Spec Term, ★Sec 2, T, 5:30-9:30, Oct. 24-Nov. 28 (6 meetings), HckrH 100, StP Campus. *No late fee through Oct. 17.*

Winter Spec Term, ★Sec 3, TTh, 5:30-9:30, Jan. 9, 16, 18, 23, 25, 30 (6 meetings—no class Jan. 11), AlderH 415, StP Campus. *No late fee through Jan. 2.*

Winter Spec Term, ★Sec 4, W, 5:30-9:30, Feb. 28-Apr. 3 (6 meetings), HckrH 100, StP Campus. *No late fee through Feb. 21.*

Spring Spec Term, ★Sec 5, T, 5:30-9:30, Apr. 16-May 21 (6 meetings), HckrH 312, StP Campus. *No late fee through Apr. 9.*

*(Instructor for the verbal section, to be assigned, will be a staff member in the Learning and Academic Skills Center at the University of Minnesota. Tom Lamb, instructor for the math section, has an M.B.A. from the Carlson School of Management and has previously taught math courses in the General College at the University)*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

## Noncredit Courses

**PSch 0611 PREPARING FOR THE GMAT.** No credit, \$260 plus \$25 special fee. Total \$285 (age 62, \$234 plus \$25 special fee. Total \$259). *Includes study materials.*

Learn test-taking strategies for dealing with the verbal, quantitative, and analytical sections of the new Graduate Management Admissions Test (GMAT). Discuss proven methods for dealing with each of the question types and work with test-simulation exercises in critical reasoning, problem solving, data sufficiency, sentence correction, essays, and reading comprehension. First class session is a proctored diagnostic exam and distribution of materials especially prepared for this seminar format as well as the study guide *The Official Guide for GMAT Review*. Instruction begins at second session. (See math review note, page 451. Limited to 40)

Fall Spec Term, ★Sec 1, MTh, 5:30-9:30, Sept. 21, 28, Oct. 2, 5, 9, 12 (6 meetings—no class Sept. 25), BioSci 12, StP Campus. *No late fee through Sept. 14.*

Fall Spec Term, ★Sec 2, TTh, 5:30-9:30, Nov. 30, Dec. 7, 12, 14, Jan. 2, 4 (6 meetings), McNH 197, StP Campus. *No late fee through Nov. 22.*

Winter Spec Term, ★Sec 3, Th, 5:30-9:30, Jan. 25-Feb. 29 (6 meetings), McNH 197, StP Campus. *No late fee through Jan. 18.*

Spring Spec Term, ★Sec 4, TTh, 5:30-9:30, May 16, 23, 28, 30, June 4, 6 (6 meetings—no class May 21), HckrH 210, StP Campus. *No late fee through May 9.*

*(Instructor for the verbal section, to be assigned, will be a staff member in the Learning and Academic Skills Center at the University of Minnesota. Tom Lamb, instructor for the math section, has an M.B.A. from the Carlson School of Management and has previously taught math courses in the General College at the University)*

**PSch 0612 PREPARING FOR THE TOEFL.** No credit, \$195 plus \$15 special fee. Total \$210 (age 62, \$175.50 plus \$15 special fee. Total \$190.50). *Includes study materials.*

Become familiar with the various types of questions used on the new Test of English as a Foreign Language (TOEFL). Learn test-taking strategies to use with vocabulary, reading, and listening comprehension questions as well as items on sentence structure and written expression. Assess your readiness for each section of the TOEFL, then develop a study plan and complete practice exercises that will help you prepare for the exam. Materials especially prepared for this seminar format distributed at the first class session. (Limited to 40)

Fall Spec Term, ★Sec 1, W, 6-9, Sept. 13-Oct. 18 (6 meetings), HckrH 312, StP Campus. *No late fee through Sept. 6.*

Winter Spec Term, ★Sec 2, W, 6-9, Jan. 3-Feb. 7 (6 meetings), HckrH 312, StP Campus. *No late fee through Dec. 27.*

Spring Spec Term, ★Sec 3, W, 6-9, Mar. 27-May 1 (6 meetings), BorH 365, StP Campus. *No late fee through Mar. 20.*

*(Instructor, to be assigned, will be a staff member in the Learning and Academic Skills Center at the University of Minnesota)*

**PSch 0613 PREPARING FOR THE LSAT.** No credit, \$225 plus \$25 special fee. Total \$250 (age 62, \$202.50 plus \$25 special fee. Total \$227.50). *Includes study materials.*

Learn test-taking strategies and practice working with the various types of questions presented on the Law School Admissions Test (LSAT). Review logical and verbal reasoning, sharpen reading comprehension, practice solving analytical reasoning problems, brush up on parts of speech, word usage, and proper sentence structure, and learn a system to use to generate ideas for and complete the required 30-minute essay. After being introduced to proven methods for dealing with each of the question types, work with test-simulation exercises. First class session is a proctored diagnostic exam and distribution of materials especially prepared for this seminar format as well as the practice book *The Official LSAT PrepTest*. Instruction begins at second session. (Limited to 40)

Fall Spec Term, ★Sec 1, Th, 5:30-9:30, Oct. 19-Nov. 16 (5 meetings), ClaOff B25, StP Campus. *No late fee through Oct. 12.*

Spring Spec Term, ★Sec 2, Th, 5:30-9:30, Apr. 18-May 16 (5 meetings), ClaOff B30, StP Campus. *No late fee through Apr. 11.*

*(Instructor, to be assigned, will be a staff member in the Learning and Academic Skills Center at the University of Minnesota)*

**PSch 0615 SURVIVING AS A STUDENT: MANAGING THE MULTIPLE PRIORITIES OF YOUR LIFE.** No credit, \$34 (age 62, \$30.60).

Being a student can be stressful for both you and the important people in your life. Discover strategies for successfully negotiating the multiple demands of being a student, wage-earner, family member, and partner in a variety of relationships. Learn how to make decisions, manage time, and build and maintain effective support systems with family, friends, and business associates. (Limited to 25)

Fall Spec Term, ★Sec 1, M, 6:30-8:30, Oct. 16, 23 (2 meetings), AmundH 120. *No late fee through Oct. 9.*

Winter Spec Term, ★Sec 2, M, 6:30-8:30, Jan. 22, 29 (2 meetings), AmundH 124. *No late fee through Jan. 16.*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

Spring Spec Term, ★Sec 3, W, 6:30-8:30, Apr. 17, 24 (2 meetings), AmundH 116. *No late fee through Apr. 10.*

*(Instructor, to be assigned, will be a staff member in the Learning and Academic Skills Center at the University of Minnesota)*

**PSch 0616 TEST-TAKING STRATEGIES.** No credit, \$34 (age 62, \$30.60).

Multiple choice. True/false. Essay exams. Do the very words send shivers down your spine? After taking a test, do you feel—as many people do—that you could have done better? That you weren't able to show on the test what you really know about the subject? Learn tips on studying for and taking both objective tests (multiple choice, true/false, matching) and subjective tests (essay exams). After discussing these tips, take a practice test at the end of the first class session and discuss the results of this test and suggestions on further improvement during the second session. (Limited to 25)

Fall Spec Term, ★Sec 1, T, 6:30-8:30, Sept. 19, 26 (2 meetings), AkerH 211. *No late fee through Sept. 12.*

Winter Spec Term, ★Sec 2, Th, 6:30-8:30, Jan. 11, 18 (2 meetings), AmundH 120. *No late fee through Jan. 4.*

Spring Spec Term, ★Sec 3, T, 6:30-8:30, Mar. 26, Apr. 2 (2 meetings), AmundH 156. *No late fee through Mar. 19.*

*(Jan DeNoble has taught classes and seminars for the University of Minnesota, government agencies, and private industry)*

**PSch 0617 TAKING EFFECTIVE NOTES FROM LECTURE AND TEXT.** No credit, \$17 (age 62, \$15.30).

Learn how to sort the wheat from the chaff. This one-session course helps you know when, why, and how to take notes. Experiment with new note-taking styles during the session, then evaluate the results and choose what will work best for you in your various courses. Learn how to adapt note-taking strategies to meet your needs. (Limited to 25)

Fall Spec Term, ★Sec 1, Th, 6:30-8:30, Oct. 5 (1 meeting), AmundH 158. *No late fee through Sept. 28.*

Winter Spec Term, ★Sec 2, W, 6:30-8:30, Jan. 10 (1 meeting), AmundH 116. *No late fee through Jan. 3.*

Spring Spec Term, ★Sec 3, M, 6:30-8:30, Apr. 1 (1 meeting), AmundH 116. *No late fee through Mar. 25.*

*(Instructor, to be assigned, will be a staff member in the Learning and Academic Skills Center at the University of Minnesota)*

## Grammar

**PSch 0620 GRAMMAR REFRESHER.** No credit, \$102 (age 62, \$91.80).

Has it been a while since you studied subjects, verbs, and all those other forgotten terms? Do you labor over sentences and agonize over paragraphs? This workshop is designed for people who had a strong background in grammar (however many years ago), but who would now like to review basic skills. It is intended for those considering returning to the classroom, those already in school and having problems with writing, and those who would like a refresher for work-related or personal correspondence. It may also be useful for those preparing for standardized tests that include a section on sentence completion. Topics include grammar, punctuation, sentence structure, and common problem areas. Format includes lecture, exercises, student participation, and weekly homework assignments. (Limited to 20)

Fall Spec Term, ★Sec 1, T, 6:30-8:30, Oct. 10-Nov. 14 (6 meetings), FordH 50. *No late fee through Oct. 3.*

Winter Spec Term, ★Sec 2, T, 6:30-8:30, Jan. 23-Feb. 27 (6 meetings), FordH 50. *No late fee through Jan. 16.*

Spring Spec Term, ★Sec 3, Th, 6:30-8:30, Apr. 11-May 16 (6 meetings), FordH 50. *No late fee through Apr. 4.*

*(Jan DeNoble has taught classes and seminars for the University of Minnesota, government agencies, and private industry)*

**PSch 0621 WORDS: MAKING THEM WORK FOR YOU.** No credit, \$51 (age 62, \$45.90).

Designed for people who want to increase their vocabulary for work or personal reasons as well as for those who simply enjoy working and playing with words. Includes Greek and Latin roots, words derived from these roots, and other useful words and word games. Appropriate for people planning to take undergraduate or graduate admissions exams or other tests requiring vocabulary skills. (Limited to 25)

Fall Spec Term, ★Sec 1, Th, 6:30-8, Oct. 5-26 (4 meetings), Lutheran Church of the Good Shepherd, 4801 France Ave. S., Edina (park in and enter from south lot). *No late fee through Sept. 28.*

Spring Spec Term, ★Sec 2, T, 6:30-8, Apr. 9-30 (4 meetings), AkerH 225. *No late fee through Apr. 2.*

*(See Jan DeNoble's biography in PSch 0620)*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

## Noncredit Courses

### **PSch 0622 MORE WORDS: MAKING THEM WORK FOR YOU.** No credit, \$51 (age 62, \$45.90).

A continuation of PSch 0621, but not limited to students who have taken that class. Focus on the definition, pronunciation, and usage of words, with word origins, the "families of words," and word games also included. Designed for people who want to build word power and increase their vocabulary for work or personal reasons, and for those who enjoy working and playing with words. It's also appropriate for people planning to take undergraduate and graduate admissions exams or other tests requiring vocabulary skills. (Limited to 25)

Winter Spec Term, ★Sec 1, Th, 6:30-8, Jan. 25-Feb. 15 (4 meetings), Lutheran Church of the Good Shepherd, 4801 France Ave. S., Edina (park in and enter from south lot). *No late fee through Jan. 18.*

(See Jan DeNoble's biography in PSch 0620)

## Reading and Writing

### **PSch 0635 BETTER READING: GAINING SPEED AND COMPREHENSION.** No credit, \$51 (age 62, \$45.90).

Improve the quality of time you spend with your textbooks. Learn strategies for reading college texts, comprehending the material, and recalling what you've read. As learning increases, you'll also find out how to adjust reading speed to suit your purpose. Practice new techniques during class sessions, then choose the strategies that work best for your courses that require extensive textbook reading. (Limited to 20)

Fall Spec Term, ★Sec 1, Th, 6:30-8:30, Oct. 12-26 (3 meetings), MurH 311. *No late fee through Oct. 5.*

Winter Spec Term, ★Sec 2, W, 6:30-8:30, Jan. 17-31 (3 meetings), LindH 320. *No late fee through Jan. 10.*

Spring Spec Term, ★Sec 3, M, 6:30-8:30, Apr. 8-22 (3 meetings), MurH 311. *No late fee through Apr. 1.*

(Instructor, to be assigned, will be a staff member in the Learning and Academic Skills Center at the University of Minnesota)

## Mathematics

### **FIRST STEP: PREPARATION FOR UNIVERSITY MATHEMATICS**

A program designed especially for people who need to review or update their skills in mathematics. May also be useful for those who are anxious about mathematics or who encounter blocks in performing mathematics computations. Through a combination of course work and supportive services, students can overcome their fear of mathematics and master the level of mathematics they need or want. The program helps students deal with their attitudes about math at the same time they are working on their math skills. Classes include *Math Skills Assessment Clinic*, *Basic Math: Concepts and Skills for the Workplace or Future Course Work*, *Elementary Algebra*, and *Preparing for Graduate Statistics*.

### **PSch 0650 MATH SKILLS ASSESSMENT CLINIC.** No credit, \$34 (age 62, \$30.60).

The Assessment Clinic is the introductory step in the Math Preparation Program. It contains a brief discussion of math anxiety/avoidance, how it develops, and how it affects mathematics performance. A test is given that allows you to determine your current level of math skill. After self-scoring the test, you will receive an interpretation of the results. Additional topics include an overview of the University math program, a discussion of the nature of mathematics, and administration of the Math Anxiety Rating Scale. (The Practical Scholar offers another diagnostic clinic, PSch 0609, that is specifically designed for people who want to determine whether they are ready to take the math portions of the GRE or GMAT. See page 451) (Limited to 25)

Fall Spec Term, ★Sec 1, M, 6-9, Sept. 18 (1 meeting), NCCE 229. *No late fee through Sept. 11.*

(Douglas Robertson is a professor in the General College at the University of Minnesota. He has received the Morse-Alumni Award for Outstanding Contributions to Undergraduate Education as well as the CEE Distinguished Teaching Award. His research interests are in developmental mathematics education)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

**PSch 0651 BASIC MATH: CONCEPTS AND SKILLS FOR WORK OR FUTURE COURSE WORK.** No credit, \$180 (age 62, \$162).

Brush up on basic arithmetic skills to prepare for other courses that use mathematics or to solve computational problems at home or on the job. Covers concepts and skills for understanding and working with fractions, decimals, ratios, proportion, percentages, simple descriptive statistics, graphs, the metric system, formulas, and geometric figures. Although this is an "applied" course, we review why mathematical operations work the way they do (for example, why do we invert and multiply when dividing fractions?). We also examine the relationships between different parts of mathematics and how they form a logical structure that can be used as a problem solving tool. Course also prepares students for Elementary Algebra, PSch 0652 or GC 0621. (Limited to 25)

Fall Spec Term, ★Sec 1, M, 6:30-8:30, Sept. 25-Nov. 27 (10 meetings), FordH 160. *No late fee through Sept. 18.*

Spring Spec Term, ★Sec 2, M, 6:30-8:30, Mar. 25-June 3 (10 meetings—no class May 27), VinH 207. *No late fee through Mar. 18.*

(See Douglas Robertson's biography in PSch 0650)

**PSch 0652 ELEMENTARY ALGEBRA.** No credit, \$180 (age 62, \$162).

For people who have a working knowledge of arithmetic but have had no algebra (or have forgotten the algebra they knew years ago). Focus on algebra as a logical language that can be used to describe real-world situations and help solve problems. Practice algebra skills to understand how and why mathematical procedures are used. Content is equivalent to a first course in algebra, and includes signed numbers, exponents, expressions, equations, inequalities, factoring, polynomials, rational expressions, and x-y graphs. Lots of time is spent on word problems. Preparation for Intermediate Algebra, PSch 0653 or GC 0625. (Limited to 25)

Winter Spec Term, ★Sec 1, Th, 6:30-8:15, Jan.

4-Mar. 14 (11 meetings), VinH 213. *No late fee through Dec. 28.*

(See Douglas Robertson's biography in PSch 0650)

**PSch 0660 TAKING THE STING OUT OF STATS: PREPARING FOR GRADUATE STATISTICS.** No credit, \$128 (age 62, \$115.20).

A preparatory course for upper-division undergraduate or graduate-level statistics in behavioral science, psychology, education, or sociology. Designed especially for those who are uneasy with the prospect of taking a statistics course or who want a basic understanding of statistical concepts. Focus is on developing statistical vocabulary and notation, descriptive statistics, probability distributions, and the fundamentals of hypothesis testing. Background in elementary algebra is helpful, but not essential. (Limited to 25)

Fall Spec Term, ★Sec 1, M, 6:30-8:30, Oct. 2-Nov. 20 (8 meetings), MurH 311. *No late fee through Sept. 25.*

(Jennifer Robey is a Ph.D. student in educational psychology at the University of Minnesota. Her teaching experience includes statistics and study skills courses at the University)

## Career Development

### INDIVIDUAL CAREER/EDUCATIONAL COUNSELING SERVICES

Are you considering additional education to enter or re-enter the work force, to enrich your current job, or to make a career change, but aren't sure where to begin? The Continuing Education and Extension/University College (CEE/UC) Department of Counseling offers individual career/educational counseling services to help you clarify your direction and take the first steps toward your new future.

Professional counselors can help you develop a better understanding of your interests, values, skills, and personal style for work and education, identify techniques and resources for exploring the world of work, guide development of an action plan, and evaluate personal concerns that may be affecting your decision making. In addition, they can recommend career and educational testing to assist with the self-exploration process.

The six-session fee-based program is intended for current or prospective students interested in CEE/UC and University of Minnesota courses and programs. Begin your planning by calling the Department of Counseling at 625-2500 to schedule a free initial consultation.

## Noncredit Courses

**PSch 0665 CAREER DECISIONS: STRATEGIES FOR CHANGE.** No credit, \$115 plus \$30 special fee. Total \$145 (age 62, \$103.50 plus \$30 special fee. Total \$133.50).

Take the first step toward assessing your job, your goals, and yourself in relation to your career. Consider values, job satisfaction, job stress, and person-environment fit as key elements of the decision to stay where you are or to make a change. Explore educational training opportunities by learning ways to identify career alternatives. An opportunity to take the Strong Interest Inventory and the Myers-Briggs Type Indicator, two vocational assessment inventories. (Limited to 25)

Fall Spec Term, ★Sec 1, W, 6-8, Sept. 27-Nov. 1 (6 meetings), NCCE 140, Peterson. *No late fee through Sept. 20.*

Fall Spec Term, ★Sec 2, M, 6-8, Oct. 23-Nov. 27 (6 meetings), NCCE 229, Huck. *No late fee through Oct. 16.*

Winter Spec Term, ★Sec 3, W, 6-8, Jan. 3-Feb. 7 (6 meetings), NCCE 229, Pelto. *No late fee through Dec. 27.*

Winter Spec Term, ★Sec 4, Th, 6-8, Feb. 1-Mar. 7 (6 meetings), NCCE 229, Krantz. *No late fee through Jan. 25.*

Spring Spec Term, ★Sec 5, W, 6-8, Mar. 27-May 1 (6 meetings), NCCE 229, Krantz. *No late fee through Mar. 20.*

Spring Spec Term, ★Sec 6, Th, 6-8, Apr. 25-May 30 (6 meetings), NCCE 229, Strowig. *No late fee through Apr. 18.*

*(Susanne Peterson is a licensed psychologist and career counselor at the University of Minnesota. She specializes in career, personal, and academic counseling for current and prospective students. Christina Huck, Ph.D. and licensed psychologist, is a career counselor who has worked with University students and other adults. She has taught career planning classes and job search workshops. Her doctoral dissertation focused on mid-life career change. Janet Pelto is a licensed psychologist and career counselor for CEE Counseling. She specializes in career, personal, and academic counseling with current and prospective students. Barbara Krantz is a licensed psychologist and career counselor for CEE Counseling. She specializes in career, personal, and academic counseling with current and prospective students. Andrew Strowig is career counselor for CEE Counseling. He has a doctorate in educational psychology from the University)*

**PSch 0666 RISK TAKING FOR PERSONAL GROWTH.** No credit, \$77 (age 62, \$69.30).

If you want to make changes in your life, your relationships, or your career, you have to take risks. Risk taking is necessary to make new friends or to enrich current relationships. This course is for those who feel they are missing out and life is passing them by, and includes taking stock of yourself as a risk taker, identifying the risks needed, overcoming risk-taking fears, assessing the benefits and consequences of the risk, taking smart risks, and building commitment and confidence. Learn how to please yourself instead of others. Designed as an educational experience, not as a therapy group. (Limited to 24)

Fall Spec Term, ★Sec 1, Th, 6:30-8:30, Sept. 28-Oct. 19 (4 meetings), AmundH 240. *No late fee through Sept. 21.*

*(Kevin J. Nutter, Ph.D., is the program director of the Career Development Center and an adjunct faculty member in educational psychology at the University of Minnesota. He is a former president of the Minnesota Career Development Association)*

**PSch 0667 CAREER UNREST AND MID-LIFE TRANSITIONS: REALIZING CHANGE.** No credit, \$95 (age 62, \$85.50).

Designed for individuals experiencing career unrest and considering a mid-life career change. Explore the theoretical and practical sides of changing careers. Topics include theories of adult/career development; integration of work, family, and community life roles; a definition of "mid-life crisis"; and an examination of factors that contribute to this phenomenon. Covers a model for targeting career unrest and a framework for dealing with life transitions. Techniques used to heighten self-awareness include vocational testing, written exercises, and imagery. Includes lecture, discussion, and small-group interaction. (Limited to 24)

Spring Spec Term, ★Sec 1, Th, 6:30-8:30, Apr. 11-May 9 (5 meetings), FordH 349. *No late fee through Apr. 4.*

*(See Kevin J. Nutter's biography in PSch 0666)*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.



**PSch 0668 BEYOND CAREER DECISIONS: STRATEGIES FOR ACTION.** No credit, \$115 (age 62, \$103.50).

This "next-step" workshop is for those who have already begun the career change process through either a course or individual counseling but remain uncertain about occupational opportunities. Continue to explore career options, research job descriptions, and conduct information interviews through brainstorming, discussion, and weekly goal setting. (Limited to 20)

Spring Spec Term, ★Sec 1, T, 6-8, May 7-28 (4 meetings), NCCE Library. *No late fee through Apr. 30.*

*(Janet Pelto and Barbara Krantz are both licensed psychologists and career counselors for CEE Counseling at the University of Minnesota. Together, they have more than 20 years of experience in career, personal, and academic counseling)*

**PSch 0669 OPPORTUNITIES IN HEALTH CARE: CAREERS FOR THE FUTURE.** No credit, \$29 (age 62, \$26.10).

Considering a career in health care? This evening workshop surveys the various jobs and settings in the health professions. Whether you're just starting out or changing careers, the health field offers possibilities in a range of disciplines that are among the fastest growing occupations. To obtain a list of jobs represented at the workshop, call 624-8880.

Fall Spec Term, Sec 1, T, 6:30-9:30, Oct. 10 (1 meeting), NCCE 140. *No late fee through Oct. 3.*

*(Instructors, to be assigned, will be health professionals with extensive experience in a variety of areas)*

**PSch 0670 OPPORTUNITIES IN HUMAN SERVICES: CAREERS FOR THE FUTURE.** No credit, \$29 (age 62, \$26.10).

Considering a career in the field of human services? This evening workshop explores the various jobs and settings in human services. Whether you're just starting out or changing careers, human services offers many possibilities. To obtain a list of jobs represented at the workshop, call 624-8880.

Spring Spec Term, Sec 1, T, 6:30-9:30, Apr. 2 (1 meeting), NCCE 140. *No late fee through Mar. 26.*

*(Instructors, to be assigned, will be human service professionals with extensive experience in a variety of areas)*

**PSch 0671 DISCOVERY WRITING: CREATING A FUTURE.** No credit, \$115 (age 62, \$103.50).

Writing can be a powerful tool for self-discovery and charting your path. This class is designed to help you examine your life for clues to what really matters to you and to experiment with ways of expressing these truths about yourself. Daily, weekly, and in-class writing experiments help you explore what you long to express. Topics include creative project notebooks, writing props and practices, freewriting, affirmations, imaginings, and more. Learn to continue the discovery process after the class ends. (Limited to 16)

Fall Spec Term, ★Sec 1, Th, 6:30-8:30, Sept. 28-Nov. 2 (6 sessions), MurH 308. *No late fee through Sept. 21.*

*(Laurie Mattila is a career counselor in private practice with Colleen Convey and Associates in Minneapolis. She has a master's degree in counseling and an interest in using writing to explore the connections between life/work satisfaction and creative expression)*

**PSch 0672 BE YOUR OWN FAIRY GODMOTHER: RESPONDING CREATIVELY TO LIFE'S CHALLENGES.** No credit, \$76 (age 62, \$68.40).

If you had a fairy godmother who waved her wand through your life, what changes would she make? What problems would she solve? Studies show creative people deal more successfully with problems, generate more ideas, have more confidence, and feel better about themselves. Learn how cultural myths can block creativity, methods for creative thinking, and how to transform negative thoughts into empowering teachers. Includes art, writing, and discussion exercises. Learn to use your creative imagination to change your life. (Limited to 20)

Fall Spec Term, ★Sec 1, Sa, 9:30 a.m.-5, Oct. 7 (1 meeting), StCen 202, StP Campus. *No late fee through Sept. 29.*

*(Kate Wolfe-Jenson is an artist who holds an M.A. in human development with an emphasis in creativity and adult development from St. Mary's College. Her paintings and handmade books were part of the "Chronic Healing as Creative Transformation" exhibit at the Sally Brown Studio in St. Paul, and her installation work, Healing Journeys, was exhibited in Minneapolis)*

## **PUBLIC RELATIONS, COMMUNICATION, AND LANGUAGE**

### **Public Relations and Promotion**

**PSch 0700 TYPOGRAPHY FOR DESKTOP PUBLISHING.** No credit, \$64 plus \$15 special fee. Total \$79 (age 62, \$57.60 plus \$15 special fee. Total \$72.60).

At your own workstation in a Macintosh lab, explore the aesthetics of desktop publishing. Focus on page design and typographic selections for good readability and legibility. Learn tips and techniques for optimizing program typographic capabilities. Develop an understanding of the aesthetics of type design and typography through lectures, discussions, and demonstrations. Designed for those familiar with Aldus Pagemaker and Quark Xpress. (Limited to 20)

Fall Spec Term, ★Sec 1, M, 6:30-8:30, Oct. 2-23 (4 meetings), ClaOff B17, StP Campus. *No late fee through Sept. 25.*

*(Michael Thomas earned a bachelor's degree in mass communications with an emphasis in advertising and industrial illustration from Moorhead State University. He currently serves as packaging design coordinator for Target Stores, Inc.)*

**PSch 0701 LAYOUT AND PAGE DESIGN FOR DESKTOP PUBLISHING.** No credit, \$64 plus \$15 special fee. Total \$79 (age 62, \$57.60 plus \$15 special fee. Total \$72.60).

Survey the vast world of creative opportunities for page design and publications at your own workstation in a Macintosh lab. Learn problem-solving skills, elements and principles of design, and visual organization through lecture, discussion, and demonstrations. Designed for those familiar with Aldus Pagemaker and Quark Xpress. (Limited to 20)

Fall Spec Term, ★Sec 1, M, 6:30-8:30, Oct. 30-Nov. 20 (4 meetings), ClaOff B17, StP Campus. *No late fee through Oct. 23.*

*(See Michael Thomas's biography in PSch 0700)*

### **Communication and Speech**

**PSch 0720 LOOKING AT LANGUAGE: FACT AND FALLACY.** No credit, \$89 (age 62, \$80.10).

Is the English language in decline? Should the United States become an "English only" country? Is English inherently sexist? Can language be used to control thought? Why can't we have a spelling system that is easy to learn? What is the best way to teach children to read? Survey today's "hot button"

issues about language through perspectives introduced by linguists—the *real* language experts—who clarify and contradict what some popular self-appointed "language mavens," like William Safire and John Simon, contend about language. The focus of this course is primarily on English, but part of the class looks at English in the context provided by the full range of the world's languages. No foreign language knowledge necessary. (Limited to 25)

Spring Spec Term, ★Sec 1, T, 6:30-8:30, Apr. 2-30 (5 meetings), FordH 115. *No late fee through Mar. 26.*

*(Michael Kac is a professor of philosophy and linguistics at the University of Minnesota. He has taught courses at all levels in both disciplines)*

**PSch 0723 DISCOVER THE INTERNET.** No credit, \$90 plus \$30 course fee. Total \$120 (age 62, \$81 plus \$30 special fee. Total \$111). *Sec 2 includes box lunch.*

What is the Internet and how can it help me? Find answers to your questions about the information superhighway through this hands-on course. Begin with an introduction to the structure of the Internet and the tools for using it such as Gopher and Mosaic. Learn how modems function, how to log into computer systems, transfer files, and use e-mail. Find out how to use Gopher resources to locate people and research information, and discuss free software and Internet service providers. Participants should be familiar with personal computers. The lab will use Microsoft Windows, but the concepts also apply to Macintosh. Students should be prepared to purchase materials at first class session for approximately \$5. (Limited to 20)

Fall Spec Term, ★Sec 1, Th, 6:15-8:45, Oct. 12-26 (3 meetings), EBCEC Computer Lab, StP Campus. *No late fee through Oct. 5.*

Winter Spec Term, ★Sec 2, Sa, 8:30 a.m.-5, Jan. 20 (1 meeting), EBCEC Computer Lab, StP Campus. *No late fee through Jan. 12.*

Spring Spec Term, ★Sec 3, M, 6:15-8:45, Apr. 8-22 (3 meetings), EBCEC Computer Lab, StP Campus. *No late fee through Apr. 1.*

*(Erick L. Wright is a senior systems analyst for Continuing Education and Extension/University College at the University of Minnesota. His current projects include construction of a World Wide Web and Gopher server for CEE/UC. He conducts training on a range on Internet topics and has developed custom networking applications used at the University)*

## Language

**PSch 0740 ITALIAN FOR TRAVELERS.** No credit, \$108 (age 62, \$97.20).

A survival course for those with no previous knowledge of Italian. It will provide you with the basic Italian vocabulary necessary for coping with these everyday travel situations: changing money, obtaining train tickets and information, renting hotel rooms, shopping, ordering meals, asking directions, and understanding telephones, post offices, and public transportation systems. Increased knowledge of Italian and of Italian culture will help you travel more adventurously and more economically. (Limited to 25)

Fall Spec Term, ★Sec 1, W, 7-9, Sept. 27-Nov. 1 (6 meetings), FolH 114. *No late fee through Sept. 20.*

*(Marjorie Eisenach has an M.A. in Italian from the University of Wisconsin. She has taught basic Italian courses and Italian for Travelers at the Universities of Wisconsin and Minnesota)*

**PSch 0741 FRENCH FOR TRAVELERS.** No credit, \$108 (age 62, \$97.20).

A survival course for those with no previous knowledge of French. It will provide you with the basic French vocabulary necessary for coping with these everyday travel situations: changing money, obtaining train tickets and information, renting hotel rooms, shopping, ordering meals, asking directions, and understanding telephones, post offices, and public transportation systems. Increased knowledge of French and of French culture will help you travel more adventurously and more economically. (Limited to 25)

Winter Spec Term, ★Sec 1, W, 7-9, Jan. 3-Feb. 7 (6 meetings), FolH 116. *No late fee through Dec. 27.*

*(April Knutson, Ph.D., is a lecturer of French language, literature, and civilization at the University of Minnesota)*

**PSch 0742 SPANISH FOR TRAVELERS.** No credit, \$108 (age 62, \$97.20).

A survival course for those with no previous knowledge of Spanish. It will provide you with the basic Spanish vocabulary necessary for coping with these everyday travel situations: changing money, obtaining train tickets and information, renting hotel rooms, shopping, ordering meals, asking directions, and understanding telephones, post offices, and public transportation systems. Increased knowledge of Spain, Latin America, and Hispanic culture will help you travel more adventurously and more economically. Emphasis will vary from area to area within the Hispanic world. (Limited to 25)

Fall Spec Term, ★Sec 1, M, 6:30-8:30, Oct. 9-Nov. 13 (6 meetings), WullH 220. *No late fee through Oct. 2.*

*(Eric Narváez is an instructor at Normandale Community College. He holds an M.A. in foreign language education and Spanish, and has lived extensively in the Spanish-speaking world)*

**PSch 0743 GERMAN FOR TRAVELERS.** No credit, \$108 (age 62, \$97.20).

A survival course for those with no previous knowledge of German. It will provide you with the basic German vocabulary necessary for coping with these everyday travel situations: changing money, obtaining train tickets and information, renting hotel rooms, shopping, ordering meals, asking directions, and understanding telephones, post offices, and public transportation systems. Increased knowledge of German and of German culture will help you travel more adventurously and more economically. (Limited to 25)

Spring Spec Term, ★Sec 1, W, 7-9, Mar. 27-May 1 (6 meetings), FolH 148. *No late fee through Mar. 20.*

*(Stefan Rink is an advanced graduate student in the Department of German at the University of Minnesota)*

**PSch 0744 AN OVERVIEW OF SIGN LANGUAGE AND DEAF CULTURE.** No credit, \$93 (age 62, \$83.70).

Are you curious about the language of signs used by deaf people? The Twin Cities area is home to thousands of deaf Minnesotans. Myths and misconceptions about deaf people and deafness create barriers for both deaf and hearing persons. Develop an appreciation and understanding of sign language and the people that use it. Learn some very basic phrases in American Sign Language and how to use fingerspelling, facial expressions, and body language to communicate. Participants can purchase an optional workbook and videotape (*Signing Naturally*) at the University of Minnesota Bookstore—East Bank. (Limited to 20)

Fall Spec Term, ★Sec 1, M, 6:30-8:30, Oct. 2-Nov. 6 (6 meetings), ChDev 105. *No late fee through Sept. 25.*

Spring Spec Term, ★Sec 2, Th, 6:30-8:30, Apr. 11-May 16 (6 meetings), ChDev 216. *No late fee through Apr 4.*

*(Alan Parnes is a vocational rehabilitation counselor for the deaf in Minneapolis. He has taught sign language at the University of Minnesota and other colleges and programs, and has lectured on the subject of deafness)*

## HUMAN DEVELOPMENT AND RELATIONSHIPS

### Self-Help

**PSch 0820 CREATIVITY AND THE MYERS-BRIGGS.** No credit, \$90 plus \$17. Total \$107 (age 62, \$81 plus \$17 special fee. Total \$98).

Everyone is creative—in different ways. Your personality influences your creativity in powerful and often predictable ways. The Myers-Briggs Type Indicator reveals not only your personality preferences, but also provides valuable insight into your creative process. By completing the MBTI prior to meeting and then receiving and discussing the results at the workshop, you'll be able to apply an awareness of type differences to a five-stage model of the creative process. You'll see why you excel at some of the stages and learn strategies to help you move through the stages that come less naturally to your Myers-Briggs type. In addition, a discussion of type dynamics will shed light on the role of the shadow in creative expression. (Limited to 25)

Fall Spec Term, ★Sec 1, Sa, 9 a.m.-5, Nov. 11 (1 meeting), AmundH 158. *No late fee through Nov. 3.*

*(Claudia Bruber has been trained by the Association for Psychological Type to administer and interpret the MBTI. She holds a master's degree in organizational development and training, and is the owner of C. Bruber Consulting Group. Rosanne Bane, M.A., has taught creativity classes at the University of Minnesota, the Loft, and Imagination Ink. She is editor of The Phoenix and a free-lance writer)*

**PSch 0822 ASSERTIVENESS TRAINING.** No credit, \$84 (age 62, \$75.60).

Becoming assertive means not only standing up for your rights in negative, confrontational situations, but also being able to express your beliefs, feelings, and opinions in an honest, open, and appropriate way. Increase communication skills while reducing anxiety and feelings of resentment and guilt by learning to distinguish assertive behavior from both passive and aggressive behavior. In class, experiment with ways to deal with day-to-day situations, choosing and practicing options that are the most effective for you. (Limited to 20)

Fall Spec Term, ★Sec 1, Th, 6:30-8:30, Oct. 12-Nov. 9 (5 meetings), FolH 246. *No late fee through Oct. 5.*

*(Ann Skytta, M.A., is a licensed psychologist with Associated Behavioral Consultants)*

**PSch 0823 PERFECTIONISM AND PROCRASTINATION.** No credit, \$50 (age 62, \$45).

Do you find yourself putting things off when you know you shouldn't? Are you always in a rush to get things done at the last minute, and do you make excuses when things are late? Is nothing you do quite good enough to measure up to your standards? Through a combination of lectures and small group discussions, learn how these behaviors originate and manifest themselves plus techniques to stop delaying tactics. Designed as an educational experience, not as a therapy group. (Limited to 25)

Fall Spec Term, ★Sec 1, T, 6-8, Oct. 10-24 (3 meetings), St. Anthony Park Library, 2245 Como Ave., StP. *No late fee through Oct. 3.*

*(Laurel Haycock, a licensed psychologist in private practice in St. Paul, has more than 10 years' experience in the field of mental health. Her Ph.D. dissertation focused on procrastination issues)*

**PSch 0824 STRESS AND SELF-ESTEEM.** No credit, \$37 (age 62, \$33.30).

The paradox of a person's self-esteem is that it is at once fragile while resilient. Most of us buffet life's storms, but often at the expense of our self-esteem. Discover how unrelieved stress effects your personal sense of well-being. Explore your own stress experiences and learn how to take more control over them. The course combines lecture, discussion, and in-class exercises, and is designed as an educational experience, not as a therapy group. (Limited to 20)

Spring Spec Term, ★Sec 1, W, 6-8, Mar. 27, Apr. 3 (2 meetings), BuH 123. *No late fee through Mar. 20.*

*(David W. Johnson, M.A., is director of the University of Minnesota Employee Assistance Program. Over the past 17 years he has presented workshops and seminars on numerous issues relating to employee health and well-being)*

## Human Relationships

**PSch 0840 IDENTITY AND INTIMACY IN CLOSE RELATIONSHIPS.** No credit, \$55 (age 62, \$49.50).

Balance is what people strive for, to connect with someone else yet remain individual. This class explores the dilemmas and choices in intimate relationships. People may behave as "attachers" (those who fear abandonment and being alone) or as "separators" (those who fear being trapped and smothered by others). At either extreme, individuals may have great difficulty in getting their needs met. An understanding of how these patterns develop and are acted out allows participants to examine their own behavior. The course is structured to help students recognize their attitudes about intimacy and suggests steps to take to achieve a more comfortable balance. Designed as an educational experience, not as a therapy group. (Limited to 30)

Winter Spec Term, ★Sec 1, W, 6:30-8:30, Jan.

10-24 (3 meetings), NCCCE Library. *No late fee through Jan. 3.*

*(Philip Colgan is the director of the Alcohol and Drug Counseling Education Program in the Department of Family Social Science at the University of Minnesota. He is also a psychotherapist in private practice in Minneapolis)*

**PSch 0841 MAN TALK, WOMAN TALK: BRIDGING THE GENDER COMMUNICATION GAP.** No credit, \$55 (age 62, \$49.50).

Research supports what men and women have known for centuries—that male and female communication styles often conflict with one another. Explore the nature and causes of this conflict, then address how the communication gap can be bridged through active listening, fair fighting, and related techniques. (Limited to 20)

Winter Spec Term, ★Sec 1, M, 6:30-8:30, Jan.

22-Feb. 5 (3 meetings), EddyH 102. *No late fee through Jan. 16.*

*(Glenn Hirsch is a licensed and consulting psychologist in private practice and a senior staff psychologist at University Counseling and Consulting Services)*

**PSch 0842 DISCOVERING MASCULINITY: A SEMINAR FOR MEN.** No credit, \$84 (age 62, \$75.60).

"If not for the beast within us, we would be castrated angels," author Herman Hesse wrote. Today, men are viewed as powerful, dominating, and controlling, yet also as noncommittal, passive, and aloof. Explore man's historical role in family and society as well as the difficulties and truths of today's male experience. Through lecture, discussion, journaling, and a group project, discover your own life story—how it has influenced who you are today and the values you want to pass on to others. Includes a guest lecture by a local playwright on ways men are portrayed in the theatre. Designed as an educational experience, not as a therapy group. (Limited to 20)

Fall Spec Term, ★Sec 1, Sa, 10 a.m.-12, Sept.

30-Oct. 28 (5 meetings), HckrH 100, StP

Campus. *No late fee through Sept. 22.*

*(Ed Kouneski, M.A. in counseling psychology, is manager of special projects for the Metropolitan Council and a graduate student in the Department of Family Social Science at the University of Minnesota)*

## FINANCIAL, CONSUMER, AND HEALTH ISSUES

### Financial and Estate Planning

#### **PSch 0903 FINANCIAL PLANNING FOR WOMEN.** No credit, \$53 (age 62, \$47.70).

Designed specifically to help women make sound financial decisions. Learn to assess your financial situation and what you should consider in planning for the future. Address formulating objectives, appropriate investments based on income needs and net worth, insurance needs, tax status, and sources of income for retirement years. Demonstrations on how to evaluate and select investments and determine risks associated with various investment options. Using case studies and examples, examine specific issues of concern to divorced, widowed, separated, or single women. (Limited to 40)

Fall Spec Term, ★Sec 1, T, 6-8, Sept. 26-Oct. 10 (3 meetings), Washburn Library, 5244 Lyndale Ave. S., Mpls. No late fee through Sept. 19.

(Jennifer Fogg, M.B.A., is a registered investment advisor with MTI Financial Services of Edina)

#### **PSch 0904 PLANNING NURSING HOME COSTS—EXPLORING THE ALTERNATIVES.** No credit, \$20 (age 62, \$18).

Long-term health care costs can be catastrophic. Minnesota costs average in excess of \$3,000 per month. Recent legislative changes at both the federal and state levels have made advanced planning imperative. How does the Medicaid program work? Are there alternatives to giving away entire estates rather than risking its loss? Receive specific information about all potential options, including Medicaid spend down planning, long-term care insurance, and other viable alternatives.

Spring Spec Term, Sec 1, W, 10:15 a.m.-12:15, Apr. 17 (1 meeting), Cathedral Church of St. Mark, 519 Oak Grove, Mpls. No late fee through Apr. 10.

(Larry Houk is a graduate at the University of Minnesota Law School. He has more than 20 years' experience in the area of estate planning and trusts, and has taught seminars on the subject to audiences nationwide. He is the co-author of Spend Down Solution)

#### **PSch 0905 WHY A LIVING TRUST?** No credit, \$20 (age 62, \$18).

Much has been written about the living trust as an alternative to guardianship and probate. *Money* magazine (Mar. 1989) recommends the revocable living trust as a precaution against the costs and abuses associated with guardianship. *Fortune* magazine (Feb. 25, 1991) and *Modern Maturity* (Sept./Oct. 1991) recommend the revocable living trust as a means of avoiding the costs and delays normally incurred in the probate process. Designed to answer your questions about living trusts, such as: What are they? How do they work? When should they be considered as an alternative to a will alone? (Limited to 30)

Fall Spec Term, ★Sec 1, Th, 10:15 a.m.-12:15, Oct. 12 (1 meeting), Gloria Dei Lutheran Church, 700 Snelling Ave. S., StP. No late fee through Oct. 5.

(See Larry Houk's biography in PSch 0904)

#### **PSch 0906 FINANCIAL PLANNING: INVESTING FOR GROWTH.** No credit, \$68 (age 62, \$61.20).

Sound financial planning especially for people age 40 and younger emphasizing wealth accumulation, cash flow management, college funding, benefits utilization, and early retirement planning. *First Session: Basic Financial Management Process.* Taking your financial inventory, personal budgeting and planning, determining goals and objectives for investment, future expenditures and cash control procedures, savings, insurance, and wills. *Second Session: Basics of Investments.* Basic features and considerations of investing in liquid reserves, individual bonds and stocks, municipal bonds, and mutual funds. *Third Session: Putting It All Together.* Integrating your objectives with investment alternatives, basic tax considerations, and structuring an investment portfolio. (Limited to 40)

Winter Spec Term, ★Sec 1, T, 6-8:30, Feb. 6-20 (3 meetings), Washburn Library, 5244 Lyndale Ave. S., Mpls. No late fee through Jan. 30.

(Jennifer Fogg, M.B.A., is a registered investment advisor with MTI Financial Services of Edina)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

**PSch 0907 FINANCIAL PLANNING: NURTURING THE NEST EGG.** No credit, \$68 (age 62, \$61.20).

Sound financial management especially for people age 40 and older emphasizing managing accumulated wealth and moving closer to retirement. *First Session: Basic Financial Management Process.* Taking your financial inventory, budgeting and planning, pre- and post-retirement, shifts in investment goals and objectives, future expenditures, insurance and estate management issues. *Second Session: Basics of Investments.* Basic features and considerations of investing in liquid reserves, individual bonds and stocks, municipal bonds, and mutual funds. *Third Session: Putting It All Together.* Integrating your objectives with investment alternatives, basic tax considerations, and structuring an investment portfolio which meets changing goals as you move toward and through retirement. (Limited to 40)

Winter Spec Term, ★Sec 1, Th, 6-8:30, Feb. 8-22 (3 meetings), Washburn Library, 5244 Lyndale Ave. S., Mpls. *No late fee through Feb. 1.*

(See Jennifer Fogg's biography in PSch 0906)

**PSch 0908 SOCIALLY RESPONSIBLE INVESTING: DOING WELL BY DOING GOOD.** No credit, \$58 (age 62, \$52.20).

Are you interested in applying your values and beliefs to your investment selections? This course begins with an overview of how to find financially strong investment alternatives. It then provides a process for identifying and prioritizing issues concerning corporate responsibility, including research, selection, and monitoring. (Limited to 40)

Fall Spec Term, ★Sec 1, W, 6-8, Nov. 1-15 (3 meetings), Washburn Library, 5244 Lyndale Ave. S., Mpls. *No late fee through Oct. 25.*

(See Jennifer Fogg's biography in PSch 0906)

**PSch 0909 INVESTMENT ANALYSIS AND PORTFOLIO BUILDING.** No credit, \$58 (age 62, \$52.20).

Once you understand what basic investments are available, how do you choose among them? Explore investment alternatives (stocks, bonds, cash, real estate), researching investments (publications, libraries, company sources), and assessing allocation of resources based on age, income, and life circumstances. Emphasis is on understanding stocks and mutual funds and investment vehicles, and working with financial professionals. Sample portfolios are used to demonstrate investment strategies. A basic working knowledge of various types of investments is required. (Limited to 40)

Spring Spec Term, ★Sec 1, W, 6-8, Apr. 3-17 (3 meetings), Washburn Library, 5244 Lyndale Ave. S., Mpls. *No late fee through Mar. 27.*

(See Jennifer Fogg's biography in PSch 0906)

**PSch 0910 DEVELOPING AN INTERNATIONAL INVESTMENT PORTFOLIO.** No credit, \$46 (age 62, \$41.40).

An introduction to international investing in the global equity and bond markets. Over 60 percent of the global equity market is outside the U.S. How do you tap into it? Do the risks and rewards involved fit with your investment goals and style? Examine historical trends in various major markets, risks and returns associated with international investing, and strategies for allocating assets to this challenging investment category. Evaluate various investment vehicles such as individual stocks and closed-end funds for investing in global markets. (Limited to 40)

Spring Spec Term, ★Sec 1, W, 6-8, May 1, 8 (2 meetings), Washburn Library, 5244 Lyndale Ave. S., Mpls. *No late fee through Apr. 24.*

(See Jennifer Fogg's biography in PSch 0906)

## Consumer Issues

**PSch 0920 THE INFORMED CONSUMER: UNDERSTANDING LABELS, WARNINGS, HAZARDS.** No credit, \$50 (age 62, \$45).

Almost everything you buy has information about the consequences of using the product. Food labels display nutritional content. Personal care products like toothpaste, cosmetics, and shampoos offer ingredients and warnings. Other items like paints, caulks, and cleaning products list hazards on their containers. Sometimes the information can mislead or confuse an uninformed consumer, or worse, it is stated so technically that it is ignored. What are the chemicals in common products and what is their purpose? Be an informed consumer. Examine some regulations behind the need for labels and warnings. Learn to read and understand several common label types and their crucial elements. Explore some of the science and nonscience behind the product and the label, and understand more about the concept of risk management. (Limited to 30)

Winter Spec Term, ★Sec 1, T, 7-9, Feb. 6-27 (4 meetings), McNH 197, StP Campus. *No late fee through Jan. 30.*

(Alfred "Kipp" Barksdale earned an M.S. and Ph.D. in chemistry from Case Western University. Previously on the University of Minnesota faculty in chemistry and laboratory medicine, he is now an independent consultant in the areas of environmental science, regulatory affairs, and quality assurance/quality control)

## Noncredit Courses

**PSch 0929 HEADS TO TAILS: A PRACTICAL GUIDE TO PET CARE.** No credit, \$52 (age 62, \$46.80).

Nearly half of all households include a dog or cat. Good pet care begins with choosing your pet and continues through the life of the animal. Before choosing a pet, find out how to evaluate and match your needs and personality to various pet characteristics. The first few months with your puppy or kitten are critical for proper socialization and leadership training; examine preventative behavior as well as guidelines for some problem situations. Learn about common diseases along with actions you can take to prevent health problems. One session is devoted to emergency care and a tour of the University of Minnesota Veterinary Teaching Hospital. The last session explores the bonds developed with pets, how to communicate with veterinarians when a pet is sick, and issues of dealing with terminal illness and loss. (Limited to 30)

Fall Spec Term, ★Sec 1, M, 6:30-8, Oct. 16-Nov. 6 (4 meetings), AnScVM 125, StP Campus. *No late fee through Oct. 9.*

*(Dr. Beth Boynton is the community practice veterinarian at the University of Minnesota Veterinary Teaching Hospital. Her special interests include behavior and preventative medicine in dogs and cats)*

## Health, Nutrition, and Fitness

**PSch 0931 MEDITATION: SEEING THE MIND.** No credit, \$86 (age 62, \$77.40).

The human mind is vast—a universe in itself and the end point of millions of years of evolution. Meditative techniques help to give a direct awareness of this mind. Such experience is healing and joyful, like visiting a mountain wilderness or a pristine ocean beach. Through discussion and practice, learn techniques to focus the mind, some yoga exercises to help limber and center the body, and a form of sitting meditation. Wear loose, comfortable clothing and bring a cushion. (Limited to 25)

Fall Spec Term, ★Sec 1, T, 6-8, Oct. 17-Nov. 14 (5 meetings), Lutheran Church of the Good Shepherd, 4801 France Ave. S., Edina (park in and enter from south lot). *No late fee through Oct. 10.*

*(Erik Storlie began a practice of sitting meditation in 1964 under Shunryu Suzuki Roshi, studied with Dainin Katagiri Roshi, and helped found the Minnesota Zen Meditation Center. A faculty member in English and humanities at Minneapolis Community College, his doctoral dissertation was a cross-cultural study of Puritan and Zen meditative experiences)*

**PSch 0932 WELLNESS AND THE ART OF SELF-CARE.** No credit, \$17 (age 62, \$15.30).

Your health is up to you. Look at the many ways to take care of yourself, including techniques to maintain balance among life activities and to reduce stress. Discuss the importance of affirmations and the joy of a healthy diet. Learn to get in touch with signals from your body and to take a responsible role in your own health care.

Fall Spec Term, Sec 1, T, 6:30-8:30, Sept. 26 (1 meeting), AmundH 162. *No late fee through Sept. 19.*

*(Amy Olson is a certified health and wellness educator and an experienced group leader)*

**PSch 0943 RECLAIMING YOUR BODY: INTRODUCTION TO BODY WORK.** No credit, \$89 (age 62, \$80.10).

Can you remember a time when your own movement felt as effortless and natural as a child's? For many, that freedom has been blocked by stress, chronic discomfort, or lack of energy. Learn ways to have both a healthier relationship with your body and improved movement through experiential exercises, discussions, and guided movement explorations of body-therapy techniques. Examine ways to change stressful movement habits, increase relaxation and physical well-being, and experience ease of movement. Briefly survey the body therapies and practitioners available locally. Includes discussions, demonstrations, and participation activities, as well as optional readings. Suitable for all ages and physical abilities. (Limited to 20)

Fall Spec Term, ★Sec 1, T, 6-7:30, Oct. 10-Nov. 21 (7 meetings), Hillcrest Recreation Center, 1978 Ford Pkwy., StP. *No late fee through Oct. 3.*

*(Barbara Loeb is a body/movement therapist trained in several different therapies and techniques. Also a dance instructor at the University of Minnesota, she has performed and choreographed on the east and west coasts and was an artist-in-residence at St. Olaf College for three years)*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.



**PSch 0944 DANCING WITH THE PSYCHE: EXPERIENCING MOVEMENT THERAPY.**

No credit, \$89 (age 62, \$80.10). Life begins with movement. Throughout life we learn about ourselves, express ourselves, and relate to others by moving. Discover how movement and dance can be a medium for growth, self-healing, and understanding. Explore a variety of movement-therapy techniques including active imagination, partner work, authentic movement, and group rituals. Includes discussions, demonstrations, and participation activities as well as optional readings. Suitable for all ages and physical abilities. Wear comfortable clothes that permit you to move. (Limited to 20)

Spring Spec Term, ★Sec 1, T, 6-7:30, Apr. 2-May 14 (7 meetings), Lutheran Church of the Good Shepherd, 4801 France Ave. S., Edina (park in and enter from south lot). *No late fee through Mar. 26.*

(See Barbara Loeb's biography in PSch 0943)

**PSch 0946 THE LONELINESS OF THE LONG DISTANCE RUNNER: MARATHON TRAINING II.** No credit, \$84 (age 62, \$75.60).

Are you in the final stages of training for the Twin Cities Marathon? Do you need a nudge to finish your race readiness? Join other runners to get yourself in shape both physically and mentally for the last stages of training. Learn techniques like tapering, what to eat on race day, and how to dress for race conditions so that you can run the marathon successfully. Principles learned in this class will help you complete "marathons" in all areas of your life. Participants should be comfortably running 40 miles per week. Class includes both lecture and training (wear loose, comfortable clothing). (Limited to 20)

Fall Spec Term, ★Sec 1, T, 6:30-8:30, Sept. 5-Oct. 3 (5 meetings), BFAB Gym Balcony. *No late fee through Aug. 29.*

(Mary Howell Langlie is an experienced kinesiology teacher as well as a coach and former member of the U.S. National Racewalking Team. She has completed many marathons, including those in the Twin Cities, Duluth, New York, and Boston)

**PSch 0947 FITNESS TESTING AND EXERCISE PRESCRIPTION.** No credit, \$67 (age 62, \$60.30).

So you're ready to start a fitness program. Or perhaps you're an experienced exerciser but need to set new goals. In either case it helps to know your current capabilities. In this workshop for exercisers of all levels, assess your fitness level and plan a

program based on your needs and goals. Spend time working one-on-one with the instructor. Each session includes both lecture and activity, so dress accordingly. (Limited to 20)

Spring Spec Term, ★Sec 1, T, 6:30-8:30, Apr. 2-23 (4 meetings), UAqCtr, Dry Classroom. *No late fee through Mar. 26.*

(See Mary Howell Langlie's biography in PSch 0946)

**PSch 0948 FITNESS FOR A LIFETIME.** No credit, \$67 (age 62, \$60.30).

Everyone can be both happy and healthy. The key is finding activities appropriate to your individual lifestyle, age, level of fitness, and interest. In this course, survey a variety of fitness activities and address the role of fitness in a balanced lifestyle. Each class session is divided into two segments: one is classroom-based and focuses on issues that may affect our activity choices and lifestyle habits; the other is participation-oriented and stresses different options for achieving a desired level of fitness. In the classroom, discuss such topics as the need for rest, balancing a busy life, nutrition, and stress reduction. For activity sessions, dress appropriately to participate in such things as walking, stretching, low-impact aerobics, sports, and games. (Limited to 20)

Winter Spec Term, ★Sec 1, T, 6-8, Jan. 9-30 (4 meetings), Gym 9, StP Campus. *No late fee through Jan. 2.*

(See Mary Howell Langlie's biography in PSch 0946)

**PSch 0949 FITNESS FOR THE ADVANCED EXERCISER: MAKING KNOWLEDGEABLE CHOICES.** No credit, \$68 (age 62, \$61.20).

Learn the inside story of exercise training, the anatomical and physiological adaptations that occur in the individual that exercises regularly. Exercises covered include endurance (aerobic), power and strength (anaerobic), and combinations of both. Explore concepts such as oxygen consumption, lactate threshold, tempo training, target heart rate, plyometrics, and ergogenic aids. Review components of sports nutrition such as carbohydrate loading and replacement, and fluid and mineral replacement and supplements. Contributions and limitations of exercise equipment will also be presented. (Limited to 25)

Spring Spec Term, ★Sec 1, W, 6:30-8:30, Apr. 3-24 (4 meetings), UAqCtr, Dry Classroom. *No late fee through Mar. 27.*

(Instructor to be assigned)

## GARDENING AND LANDSCAPING

### Landscaping

**PSch 0950 LANDSCAPING THE MINNESOTA HOME GROUNDS.** No credit, \$84 (age 62, \$75.60).

Investigate ways to improve the design of your yard or garden. Explore the artistic aspects of gardening and learn the best placement, staging, and use of plants in landscape design. Learn the roles mood and balance play in landscape design and how to make small grounds have the effect of larger grounds. Establish pictorial effects in yards and grounds akin to the moods evoked by a painting. Includes a tour of a local garden. (Limited to 35)

Spring Spec Term, ★Sec 1, T, 6:30-8:30, Apr. 2-30 (5 meetings), HckrH 100, StP Campus. *No late fee through Mar. 26.*

*(Glenn Ray is a consultant in horticultural arts with an emphasis on artistic aspects of gardening. He is a former director of the Minnesota Horticultural Society)*

**PSch 0953 DESIGNING GARDENS AND YARDS WITH THE ENVIRONMENT IN MIND.** No credit, \$96 (age 62, \$86.40).

Your home is a small part of a much larger environmental framework; however, current practices of homebuilding and landscaping firms do not take into account the ecological function of your yard or its connection to the larger environment. Learn to design your home garden and yard as a living ecological entity, capable of having a measurable effect on storm water runoff, wildlife habitat, microclimatic conditions, and other environmental concerns. Explore how changing cultural ideals affect the appearance of American homes and gardens, and how the recent shift toward environmentalism is being reflected in the look of our residential areas. Discuss garden design in light of environmental values and issues. Includes a half-day Saturday field trip (**Oct. 7; participants provide own transportation and may choose to carpool**) to tour a residential garden in the metro area. (Limited to 25)

Fall Spec Term, ★Sec 1, W, 6:30-8:30, Sept. 27-Oct. 25 (5 meetings plus field trip), HckrH 100, StP Campus. *No late fee through Sept. 20.*

*(Fred Rozumalski holds degrees in horticulture, ecology, and landscape architecture from the University of Minnesota. He practices ecosystem restoration and sustainable garden design in the Twin Cities with Native Landscape Design and Restoration, Ltd.)*

**PSch 0954 ACROSS THE SEASONS: DESIGNING GARDENS FOR YEAR-ROUND BEAUTY.** No credit, \$66 (age 62 and MHS members, \$59.40).

"As in all matters relating to design in gardening, the good placing of plants in detail is a matter of knowledge of an artistic character," wrote Gertrude Jekyll in *Color Schemes for Flower Gardens* (1936). For those who want to design their gardens to give beauty throughout the year. Learn how to incorporate design fundamentals with perennials, annuals, small trees, and shrubs. Review the history of gardens as well as current trends in creating the "new American garden." Learn to orchestrate seasonal interest, create effective winter landscapes, and acquire ideas on the uses of garden structures and materials (paths, benches, gates, walls, etc.). For novice and experienced gardeners. (Offered in cooperation with the Minnesota Horticultural Society. Limited to 25)

Spring Spec Term, ★Sec 1, T, 10 a.m.-12, Apr. 2-23 (4 meetings), Center for Northern Gardening, 1755 Prior Ave. N., Falcon Heights. *No late fee through Mar. 26.*

*(Carter Lee Clapsadle received his horticulture/plant biology degree from the University of Minnesota and is the landscape horticulturist for the College of St. Catherine. He is also a partner in the Clapsadle-Baugnet Design Studio, a graphics and garden design firm)*

**PSch 0956 ENVIRONMENTALLY SOUND LAKESHORE HOME LANDSCAPING.** No credit, \$96 (age 62, \$86.40).

The beautiful lakes that lakeshore home owners and north woods cabin owners have built on are slowly degrading. Maintenance practices of lakeshore landscapes greatly influence the health of freshwater lakes and the fish and wildlife species that live in and near them. Learn to create a comfortable lakeshore landscape for people to occupy and that attracts and accommodates wildlife. Explore design ideas for your property that protect lake water quality while reducing maintenance time and expense. Discover how a lakeshore ecosystem functions and how lakeshore homes can sit within a healthy ecosystem rather than replace it. Includes half-day Saturday field trip to a lakeshore habitat (**May 18; participants provide own transportation and may choose to carpool**). (Limited to 25)

Spring Spec Term, ★Sec 1, W, 6:30-8:30, Apr. 17-May 15 (5 meetings plus field trip), HckrH 100, StP Campus. *No late fee through Apr. 10.*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

*(Fred Rozumalski holds degrees in horticulture, ecology, and landscape architecture from the University of Minnesota. He practices ecosystem restoration and sustainable garden design in the Twin Cities with Native Landscape Design and Restoration, Ltd.)*

**PSch 0961 SELECTING TREES, SHRUBS, AND VINES FOR YOUR HOME AND GARDEN.** No credit, \$53 (age 62 and Arboretum members, \$47.70).

Review the best performing trees and shrubs for this area based on continuing trials at the Minnesota Landscape Arboretum. The class plant list includes both deciduous and evergreen trees and shrubs. Mature size and form, fall color, and other ornamental traits are discussed. Cultural requirements and out-of-season characteristics such as bloom and winter silhouettes are illustrated in slide lectures. Includes early evening field trip to Arboretum (**May 15; participants provide own transportation and may choose to carpool**) to view plantings. (Offered in cooperation with the Minnesota Landscape Arboretum. Admission fee to Arboretum waived with course registration receipt. Limited to 30)

Spring Spec Term, ★Sec 1, W, 6:15-8:15, May 1, 8 (2 meetings plus field trip), AlderH 415, StP Campus. *No late fee through Apr. 24.*

*(Mike Zins is a horticulturist with the Minnesota Extension Service and has taught at the Arboretum for many years)*

## Gardening

**PSch 0964 PROPAGATING WILDFLOWERS AND NATIVE PLANTS.** No credit, \$112 (age 62 and Bell Museum members, \$100.80).

Native plants are becoming increasingly popular for use in home landscaping, and you can easily grow these plants from seeds or cuttings. Fall is the best time to collect, clean, and store seeds. Learn about seed treatments, dormancy, sowing techniques, and proper cultural methods. Additional topics include spore propagation and tissue culture, and asexual propagation methods such as cuttings and division. Demonstrations illustrate propagation techniques from seeds and cuttings and how to mix soils and soilless media. One half-day Saturday field trip to a local nursery specializing in wildflowers introduces the diversity of native plants available locally (**Oct. 7; participants provide own transportation and may choose to carpool**). (Offered in cooperation with the Bell Museum of Natural History. Limited to 25)

Fall Spec Term, ★Sec 1, W, 6-8, Sept. 20-Nov. 1 (6 meetings plus field trip—no class Oct. 25), BioSci 176, StP Campus. *No late fee through Sept. 13.*

*(C. Colston Burrell is a landscape designer, consultant, writer, and photographer. He has M.S. degrees in horticulture and landscape architecture, and a lifelong interest in the growing and propagation of native plants. His design business, Native Landscape Design and Restoration, Ltd., promotes the integration of natural and cultural systems)*

**PSch 0965 GROWING WILDFLOWERS AND NATIVE PLANTS IN YOUR GARDEN.** No credit, \$80 (age 62 and Bell Museum members, \$72).

Native plants offer a wild beauty to landscaped yards or gardens and are surprisingly easy to cultivate. Learn to maintain wildflowers, ferns, and woody plants native to this region. Review native plant habitats, natural plant associations, and ways of using native plants through slides and lectures. Additional lectures will cover growth requirements, planting techniques, and garden maintenance. (Offered in cooperation with the Bell Museum of Natural History. Limited to 25)

Winter Spec Term, ★Sec 1, T, 6:15-8:15, Jan. 9-Feb. 6 (5 meetings), Bell Museum 175 (use auditorium entrance facing Church Street). *No late fee through Jan. 2.*

*(See C. Colston Burrell's biography in PSch 0964)*

**PSch 0966 SPRING PERENNIALS: IDENTIFICATION AND USE IN THE GARDEN.** No credit, \$66 (age 62, \$59.40).

Usher in the gardening season with a series of forays to discover the diversity of Minnesota's hardy spring-blooming perennials. Focus on identification, cultural requirements, and landscape use. First class meets on the East Bank campus; subsequent classes are held at local gardens or nurseries to see the many ways that perennials can be used to enhance the home landscape. Class meets throughout the spring in order to view the largest possible selection of plants. (Limited to 20)

Spring Spec Term, ★Sec 1, W, 6-8:30, Apr. 24-May 29 (4 meetings—no class May 8, 22), NCC 140. *No late fee through Apr. 17.*

*(See C. Colston Burrell's biography in PSch 0964)*

## Noncredit Courses

### **PSch 0969 HARDY SHRUB ROSES FOR YOUR GARDEN.** No credit, \$34 (age 62 and MHS members, \$30.60).

Are you tired of having to protect your roses each winter? Newly developed varieties of hardy shrub roses are now available to Minnesota gardeners. These plants offer great landscape value with minimal maintenance. Learn more about these new plants from the instructor and a panel of Minnesota rose experts. Plan your new rose garden in class and get a jump on ordering bushes for spring. (Offered in cooperation with the Minnesota Horticultural Society. Limited to 30)

Fall Spec Term, ★Sec 1, W, 6:30-8:30, Sept. 20, 27 (2 meetings), Center for Northern Gardening, 1755 Prior Ave. N., Falcon Heights. *No late fee through Sept. 13.*

*(Anne Hanchek is an assistant professor of horticultural science and a Minnesota Extension Service environmental horticulturist at the University of Minnesota. She is also the director of educational programs at the Minnesota Landscape Arboretum)*

### **PSch 0970 LASTING BULBS: GROWING AMARYLLIS INDOORS.** No credit, \$17 plus \$10 special fee. Total \$27 (age 62, \$15.30 plus \$10 special fee. Total \$25.30).

Imagine colorful lily-like flowers eight inches across. Bright, showy amaryllis flowers add splendor to the winter holidays. Amaryllis bulbs purchased in the fall and properly cared for indoors will bloom during the winter and for years to come. Get your money's worth when you buy these bulbs by learning how to grow them successfully in this one-evening workshop. Amaryllis bulb, soil, and pot provided. (Limited to 25)

Fall Spec Term, ★Sec 1, M, 6:15-8:15, Nov. 6 (1 meeting), HrG, StP Campus. *No late fee through Oct. 30.*

*(Deborah Brown, associate professor in the Department of Horticultural Science at the University of Minnesota, supervises the horticultural part of the Dial U Insect and Plant Information Service. She hosts "Minnesota Gardening" on cable television, writes a gardening column for the Minneapolis Star Tribune, and is a frequent guest on Minnesota Public Radio)*

## **Fruit/Vegetable/Tree/Shrub Growth Care**

### **PSch 0976 VEGETABLE GARDENING FROM THE GROUND UP.** No credit, \$50 (age 62, \$45).

Harvest a bounty of fresh vegetables from your own back yard! Survey the whys as well as the hows of gardening to make the most of the space you have. Get the jump on spring with tips and tricks for starting seeds indoors. Find out which crops need an early start and when to start them, what happens during germination, the pros and cons of saving seeds, how to prevent disease, and how to minimize transplant shock. Learn how to evaluate and deal with problem soils, make organic or chemical fertilizer choices, optimize space by training crops on trellises or in cages, and select the best varieties for our climate. Discuss general garden maintenance, companion planting, succession planting, mulching to reduce weeding and retain soil moisture, and organic and chemical choices for preventing disease and insect damage.

Spring Spec Term, ★Sec 1, T, 6:30-8:30, Mar.

26-Apr. 9 (3 meetings), HrG, StP Campus. *No late fee through Mar. 19.*

*(Beth R. Jarvis is a horticulture technician with the Minnesota Extension Service's Dial U Insect and Plant Information Clinic. She holds a master's degree in horticulture with a minor in plant pathology, has extensive experience growing vegetables in small city lots as well as large farm gardens, and has written articles for Minnesota Horticulturist)*

### **PSch 0981 THE BASICS OF HOME LAWN CARE.** No credit, \$66 (age 62, \$59.40).

A healthy, well-maintained lawn adds to the value of your home as well as to your enjoyment of your property. This course covers the selection of appropriate grass species for Minnesota lawns, special site conditions, basic turfgrass biology, and the relationship that watering, fertilizing, and mowing have to healthy grass growth. Also includes pest-management strategies for controlling insects, diseases, and weeds. (Limited to 25)

Spring Spec Term, ★Sec 1, Th, 6:30-9, Apr. 11-25 (3 meetings), HrG, StP Campus. *No late fee through Apr. 4.*

*(Bob Mugaas is a Minnesota Extension Service horticulturist in Hennepin County and a turf specialist)*

**PSch 0982 FALL YARD CARE.** No credit, \$34 (age 62 and MHS members, \$30.60).

Fall is an ideal time to improve your yard since many garden activities are well suited to cooler days. Learn what to do and why. Topics include basic information on tree and shrub planting (plant selection, planting techniques), herbaceous perennial transplanting (types and treatments), tender plant protection, turf care (seeding, herbicides, fertilizing), and yard-waste disposal (composting, mulching, off-site disposal). (Offered in cooperation with the Minnesota Horticultural Society. Limited to 25)

Fall Spec Term, ★Sec 1, Th, 6:30-8:30, Sept. 21, 28 (2 meetings), HckrH 100, StP Campus. *No late fee through Sept. 14.*

*(Jeffrey Johnson is a horticulturist at the Minnesota Landscape Arboretum with responsibility for maintaining the tree and shrub research nurseries. He is also a horticultural consultant, having studied and worked in the field for 16 years)*

**PSch 0983 PRUNING LANDSCAPE TREES AND SHRUBS.** No credit, \$34 (age 62 and MHS members, \$30.60).

Trees and shrubs are an integral part of most landscape settings in the Upper Midwest, and pruning them is necessary to maintain an attractive and healthy condition. Learn to maximize beauty, flower and fruit, form, longevity, and safety in your landscape. Understand basic plant growth and development as it pertains to maintenance pruning. Other topics include pruning terminology, deciduous and evergreen treatments, timing, proper cuts/techniques, renewal pruning, hedges, and equipment. (Offered in cooperation with the Minnesota Horticultural Society. Limited to 25)

Winter Spec Term, ★Sec 1, W, 6:30-8:30, Mar. 20, 27 (2 meetings), Center for Northern Gardening, 1755 Prior Ave. N., Falcon Heights. *No late fee through Mar. 13.*

*(See Jeffrey Johnson's biography in CSch 0982)*

**PSch 0984 TREE AND SHRUB CARE.** No credit, \$50 (age 62 and Arboretum and MHS members, \$45)

Care of woody plants in the landscape is an ongoing process that starts with choosing a healthy tree or shrub at the nursery and continues through mature plant maintenance. Follow this process by reviewing plant selection, site selection, planting and transplanting, fertilization, pruning, and pest management. A half-day Saturday field trip to the Minnesota Landscape Arboretum (**May 25; participants**

**provide own transportation and may choose to carpool**) includes demonstrations of tree and shrub care techniques. (Offered in cooperation with the Minnesota Landscape Arboretum and the Minnesota Horticultural Society. Admission fee to Arboretum waived with course registration receipt. Limited to 20)

Spring Spec Term, ★Sec 1, Th, 6:30-8:30, May 16, 23 (2 meetings plus field trip), Center for Northern Gardening, 1755 Prior Ave. N., Falcon Heights. *No late fee through May 9.*

*(David Stevenson has a master's degree in natural resource management and is curator of plant collections at the Minnesota Landscape Arboretum)*

## Miscellaneous

**PSch 0986 A ROSE BY ANY OTHER NAME: UNDERSTANDING SCIENTIFIC NAMES OF PLANTS.** No credit, \$34 (age 62 and Minnesota Landscape Arboretum members, \$30.60).

There are a half dozen trees that go by the common name ironwood, but only one answers to *Carpinus caroliniana*. Scientific names of plants can be confusing, but knowing them is essential if you want the right information about a specific plant. Take the intimidation out of the scientific names of well-known garden and ornamental plants by discovering what they mean. For example, the species designation *albiflora* makes sense knowing that *alba* (white) is linked to English words like albino, and *flora* to flower and floral. Understand plant names by learning common Greek and Latin roots that describe colors, plant parts, or region of origin. (Limited to 30)

Spring Spec Term, ★Sec 1, Th, 6:30-8:30, Apr. 11, 18 (2 meetings), Minnesota Landscape Arboretum, Snyder Bldg., Room 1, 3675 Arboretum Drive, Chanhassen. *No late fee through Apr. 4.*

*(Nancy Rose is a research horticulturist at the Minnesota Landscape Arboretum. She has a master's degree in horticulture and broad experience with ornamental plants)*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

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## Noncredit Courses

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**PSch 0987 SPLENDOR UNDER GLASS:  
GREAT CONSERVATORIES OF THE UPPER  
MIDWEST.** No credit, \$50 (age 62, \$45).

Early conservatories of the Victorian era were an attempt to preserve plants brought back by collectors from exotic lands. Today's conservatories still preserve nonnative species, but they also provide a place that delights the senses and educates the mind. In the Upper Midwest we have several examples of conservatory architecture, from the Victorian Como Park Conservatory in St. Paul to the geodesic domes of Milwaukee's Mitchell Park and the modern sculptural conservatory of the Walker Art Center in Minneapolis. Learn about the history, architecture, and modern uses of conservatories, and about other wonderful examples in nearby states and Canada. Includes a half-day field trip to local conservatories **(Feb. 10; participants provide own transportation and may choose to carpool)**. (Limited to 22)

Winter Spec Term, ★Sec 1, M, 6:15-8:15, Jan.

29, Feb. 5 (2 meetings plus field trip), HckrH

100, StP Campus. *No late fee through Jan. 22.*

*(Roberta Sladky, former director of the University of Minnesota College of Biological Sciences greenhouse, is the manager of Como Park Conservatory)*

## Compleat Scholar Weekends

Spend uninterrupted time reading a book, discussing a challenging idea, or studying with an expert. Compleat Scholar Weekends (CSW) combine the pleasures of learning with a weekend away from it all. Each weekend is led by a University of Minnesota faculty member or expert, is limited in size to allow for small group conversations, and is held at a comfortable retreat center or lodge with recreational facilities to enjoy during your free time.

### Registration Information

You may register for these weekends at any time before the stated deadline. Registrations are accepted on a first-come, first-served basis. Register in person or by mail in 206 Westbrook Hall, 77 Pleasant Street S.E., Minneapolis, MN 55455; or call (612) 624-8880 for more information.

**Registrations may be charged to VISA, Discover, or MasterCard.**

### CSW 0700 SPRING WILDFLOWER WEEK-END. Apr. 27-28, 1996.

Spend a weekend searching for spring wildflowers in the lush woods and limestone bluffs of southeastern Minnesota. Floral dissection and use of a wildflower guidebook will be the most formal portion of the weekend. Rain or shine, explore the area of Lanesboro, including Beaver Creek Valley State Park, looking for harbingers of spring such as anemones, trillium, and blood root. Stay at Mrs. B's historic (circa 1890) bed and breakfast, where each room is furnished with a queen-sized bed and has its own bathroom. The weekend begins at 1 p.m. Saturday and concludes at 4 p.m. Sunday. There is a pre-trip lecture on Wednesday, Apr. 10, at 6:30 p.m. in Nolte Center Library. (Limited to 18)

**Registration deadline is Mar. 28.**

Spring Spec Term, ★Sec 1, no credit, \$200 price includes one night lodging (double occupancy), three meals, and a pre-trip lecture.

*(Group leader is Roberta Sladky, former director of the University of Minnesota College of Biological Sciences greenhouse and currently the manager of Como Park Conservatory in St. Paul. She is a wildflower enthusiast and an experienced group leader)*

### CSW 0701 THE ANATOMY OF A TROUT STREAM. May 18-19, 1996.

Put on the hip boots, start wading and turning over rocks, and join aquatic entomologist Dean Hansen for an exploration into the basics of a trout stream

ecosystem. Learn about water currents and temperature cycles, stream plants, and the myriad varieties of insects and crustaceans in Knapp Creek, a small "user friendly" brook trout stream. Explore mayfly hatches, invertebrate drift, feeding strategies, and energy flows. Passive learners beware—you'll be getting your hands wet as you are introduced to clinging mayfly nymphs or trying your hand at simple underwater photomacrography. Don't worry about learning Latin names or memorizing minutia—look instead at the big picture of what makes a stream tick. Weekend includes free time to do fly angling. Stay at Seven Pines Lodge, a historic log retreat secluded in a pine forest wilderness and nestled on the banks of Knapp Creek. Located just over an hour's drive from the Twin Cities in Lewis, Wisconsin, Seven Pines was founded in 1903 as a family retreat by Charles Lewis, a Minneapolis grain broker. It is now on the National Register of Historic Places. The weekend begins at 9 a.m. on Saturday and concludes at 4 p.m. on Sunday. There is a pre-trip lecture on Monday, May 6, at 6:30 p.m. in Nolte Center Library. (Limited to 18)

**Registration deadline is Apr. 18.**

Spring Spec Term, ★Sec 1, no credit, \$200 price includes one night lodging (double occupancy), four meals, and a pre-trip lecture.

*(Dean C. Hansen earned a Ph.D. in entomology at the University of Minnesota. He has extensive teaching experience and serves as a resource consultant for Bright Waters Fishing Shop, conducting fly-fishing trips to Idaho, Montana, and Wyoming)*

### CSW 0702 WILDFLOWERS OF THE NORTH SHORE. June 14-16, 1996.

Enjoy the wildflowers of the boreal forest along Minnesota's North Shore. Look for twin flower, lady's slipper, bunchberry, and the many members of the blueberry family along woodland trails of Judge C. R. Magney State Park and the coastal rocks of Lake Superior. Accommodations are at the picturesque Naniboujou Lodge on the shore of Lake Superior north of Grand Marais. The weekend begins Friday evening and concludes at noon on Sunday. There is a pre-trip lecture on Wednesday, May 29, at 6:30 p.m. in Nolte Center Library. (Limited to 20)

**Registration deadline is May 15.**

Spring Spec Term, ★Sec 1, no credit, \$240 price includes two nights' lodging (double occupancy), four meals, and a pre-trip lecture.

*(Group leader is Roberta Sladky, former director of the University of Minnesota College of Biological Sciences greenhouse and currently the manager of Como Park Conservatory in St. Paul. She is a wildflower enthusiast and an experienced group leader)*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.

## Noncredit Courses

**CSW 0703 WINTER WILDLIFE.** Feb. 16-18, 1996.

During this extended weekend, enjoy the northern beauty of Itasca State Park by studying adaptations of plants and animals to the Minnesota winter climate. Strap on the snowshoes for two half-day nature hikes to look for examples of wildlife activity and to discuss their strategies for survival. Use the afternoons for personal interests such as cross-country skiing or to carry out optional mini-experiments suggested by the instructor. The weekend begins Friday evening and concludes at noon on Sunday. The pre-trip meeting (Wednesday, Jan. 17, 6:30 p.m., St. Paul Student Center 202) includes an introductory lecture and time to plan transportation, food, and lodging arrangements at the Lake Itasca Forestry and Biological Station. Before heading to Itasca, get acquainted with winter wildlife during a half-day field trip to Cedar Creek Natural History Area (Saturday, Feb. 3; participants provide own transportation and may choose to carpool). (Limited to 17)

**Registration deadline is Jan. 12.**

Winter Spec Term, ★Sec 1, no credit, \$132 price includes two nights' lodging (double occupancy), a pre-trip lecture, and the half-day field trip.

*(Jake Miller has a Ph.D. from the Department of Ecology, Evolution, and Behavior at the University of Minnesota. He is a field biologist with an extensive teaching background and research experience focusing on bird behavior)*

**CSW 0800 WHAT IS OUR RESPONSIBILITY TO THE ENVIRONMENT? MAINTAINING A SUSTAINABLE QUALITY OF LIFE ON PLANET EARTH.** Oct. 13-15, 1995.

Beginning with the works of thinkers such as Aldo Leopold, Henry David Thoreau, and John Muir, explore the development of environmental awareness in the United States and the world. Debate the key concepts of land ethic, environmental awareness, and biodiversity in this weekend retreat at Wilder Forest in rural Washington County. Read *A Sand County Almanac* and selections from other authors, discuss the complexity of environmental issues, and consider future possibilities for maintaining our quality of life into the future. Lecture and discussion are interspersed with free time to enjoy the recreational activities or just to relax in the beautiful woodland setting. Weekend begins Friday evening and concludes at noon on Sunday. There is a pre-trip lecture on Wednesday, Sept. 20, at 6:30 p.m. in Nolte Center 229. (Limited to 16)

**Registration deadline is Aug. 11.**

Fall Spec Term, ★Sec 1, no credit, \$228 price includes two nights' lodging (double occupancy), four meals, and a pre-trip lecture.

*(Ron Nickerson is a park planner with the Minnesota Department of Natural Resources and a graduate student in the Department of Forest Resources at the University of Minnesota)*

**CSW 0801 MID-LIFE CAREER AUDIT: DECIDING WHAT TO DO WITH THE REST OF YOUR LIFE.** Nov. 3-5, 1995.

Are you at that stage of life when you would like to explore new options? Are you thinking about changing career paths? This weekend seminar is designed to help you re-evaluate your adult interests, values, and personal characteristics, and then apply this information to increase job satisfaction. Using a standardized assessment approach to help heighten self-knowledge and to develop an accurate picture of your work self, complete an interest inventory, the Myers-Briggs Type Indicator, and other assessment tools. Interpret these inventories and apply this "new" knowledge to your career development. Finally, develop an action plan for the next stage of your life. This weekend will be held at Koinonia, a retreat center on Lake Sylvia in Annandale, Minn., about an hour's drive from the Twin Cities. Lecture and discussion are interspersed with free time to bike the lakeshore paths, to read and write, or just to relax in the beautiful woodland setting. The weekend begins Friday evening and concludes Sunday at noon. There is a pre-trip lecture on Tuesday, Oct. 17, at 6:30 p.m. in Nolte Center Library. (Limited to 26)

**Registration deadline is Sept. 1.**

Winter Spec Term, ★Sec 1, no credit, \$248 price plus \$20 special fee. Total of \$268 includes two nights' lodging (double occupancy), four meals, and a pre-trip lecture.

*(Kevin J. Nutter, Ph.D., is the program director of the Career Development Center at the University of Minnesota. Alisa Eland, associate counselor in International Student and Scholar Services at the University, has an M.A. in counseling and student personnel psychology. She has extensive experience in career counseling)*

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.



**CSW 0802 THE BEGINNING AND END OF THE UNIVERSE.** Mar. 1-3, 1996.

In a deep underground iron mine in northern Minnesota, scientists from around the world are searching for clues to understand both the beginning and the possible end of the universe. In this weekend workshop, discuss the science behind the search for spontaneous decay of matter (proton decay) and the importance of measuring the mass of neutrinos, a possible component of dark matter. Visit the operating Soudan 2 Detector, 1,000 tons of heavily instrumented iron located in a room 45-feet wide by 230-feet long by 40-feet high that is one-half mile underground in Soudan Underground Mine State Park. Hear about the proposed experiment that would send a beam of neutrinos from the Fermilab near Chicago straight through the earth to Soudan. Stay in a comfortable cabin at Silver Lake Lodge, a historic resort situated on a picturesque point of land between White Iron and Farm and Garden lakes near Ely. Lecture, discussion, and activities are interspersed with free time to enjoy winter activities—cross country skiing, snowshoeing, and ice skating—or just to relax by a fireplace in a beautiful north woods setting. Weekend begins Friday evening and ends at noon on Sunday. There is a pre-trip lecture on Wednesday, Feb. 7, at 6:30 p.m. in Nolte Center Library. (Limited to 20)

**Registration deadline is Jan. 31.**

Winter Spec Term, ★Sec 1, no credit, \$235 price includes two nights' lodging (double occupancy), five meals, and a pre-trip lecture.

(*Marvin Marshak, head of the School of Physics and Astronomy at the University of Minnesota, has conducted research at the Soudan Underground Mine since 1980. He has over 30 years' experience studying elementary particle physics and has conducted research at the Fermi Laboratory and the Brookhaven National laboratory. He has been at the University since 1974*)

**CSW 0900 FACES IN THE MIRROR: SELF-ESTEEM, SEXUALITY, AND SELF-IMAGE.** Feb. 2-4, 1996.

A weekend retreat designed to discover the messages women have learned about their bodies and to look at ways to enhance a woman's self-image. Would you like to be thinner, have a straighter nose, smaller thighs, curlier hair? Many women are dissatisfied with their self-image. Yet what you think and feel about your body, your looks, and your sexuality is affected by your personal, social, cultural, and spiritual history. Take time to explore ways to develop self-images that are healthier, more positive, and self-empowered. This weekend at Wilder Forest, a retreat center on 980 acres of forest and lakes in rural Washington County, includes

lecture, discussion, movement, and guided imagery exercises along with plenty of free time to enjoy the recreational facilities or just to relax in a beautiful woodland setting. Weekend begins Friday evening and concludes Sunday at noon. There is a pre-trip lecture on Tuesday, Jan. 16, at 6:30 p.m. in Nolte Center Library. (Limited to 16)

**Registration deadline is Dec. 1.**

Winter Spec Term, ★Sec 1, no credit, \$228 price includes two nights' lodging (double occupancy), four meals, and a pre-trip lecture.

(*Barbara Loeb, a dance instructor at the University of Minnesota, is a body/movement therapist trained in several different therapies and techniques. She has taught a course on self-esteem, sexuality, and self-image for the Department of Women's Studies at the University*)

**CSW 0901 BEYOND THE COMING OUT STORY: A WEEKEND OF READING, WRITING, AND REFLECTION.** Mar. 29-31, 1996.

Coming out stories, poet Adrienne Rich notes in her forward to *The Original Coming Out Stories*, "both repeat and contradict each other. . . . They are incomplete; some of the truths we need are not here. The telling must go on." For lesbians, bisexuals, transgender persons, and gay men, the everyday experience of telling life stories is an act of coming out. Over time, the coming out experience changes. Life stories shift from the initial act of coming out to the experience of being out. During this weekend at Wilder Forest, a retreat center on 980 acres of forest and lakes in rural Washington County, spend time in conversation about the place of coming out stories in your life, in reading and discussing essays by contemporary writers (Minne Bruce Pratt, Essex Hemphill, and Kate Bornstein, for example), and in writing and sharing your writing that goes beyond the coming out story. Lecture, discussion, and writing are interspersed with free time to enjoy recreational facilities or just to relax in the beautiful woodland setting. Weekend begins Friday evening and concludes Sunday at noon. There is a pre-trip lecture on Wednesday, Mar. 6, at 6:30 p.m. in Nolte Center Library. (Limited to 16)

**Registration deadline is Jan. 25.**

Spring Spec Term, ★Sec 1, no credit, \$228 price includes two nights' lodging (double occupancy), four meals, and a pre-trip lecture.

(*Ilene Alexander, Ph.D. in American studies from the University of Iowa, has taught locally at the College of St. Catherine and Minneapolis Community College. She has presented papers at numerous conferences, including Teaching Our Dialogues and Differences and Feminist Pedagogy in the General Education Classroom, theses on educational diversity*)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 54.



Research Explorations (REX) offers the opportunity for public participation in field and laboratory research projects of University of Minnesota faculty.

Research projects for 1995-96 have been scheduled throughout Minnesota and focus on a variety of topical areas, including natural resources, social and health issues, agriculture, wildlife management, history, and business.

REX participants share in the work load of the research team's day. Under the guidance of the project leader and staff, they may be asked to hike, boat, climb, dig, or engage in other physical activities. Volunteers may also assist in data collection, observation, photography, sampling, questionnaires, interviews, and coding.

Volunteers enjoy experiential learning while advancing important research and expanding intellectual horizons.

### Application Process

Volunteers apply for a project of choice. Applications are screened, and the project leader has final approval. Many REX projects can accommodate only a limited enrollment. **Persons interested in participating in the REX program should call (612) 624-5092 for complete information and an application form.**

Although applications are accepted on a continuous basis, preference is given to those received at least four weeks prior to the start of desired participation. Applications received after the preferential due dates, listed below, may experience delayed responses.

|                 |                   |
|-----------------|-------------------|
| Fall Quarter:   | August 24, 1995   |
| Winter Quarter: | December 5, 1995  |
| Spring Quarter: | February 26, 1996 |

### Qualifications for REX Participation

The most important qualifications required of REX participants are commitment, common sense, and adaptability to different situations. A few projects require advanced skills and knowledge of the topic at hand. Contact the REX office (612/624-5092) for specific project qualifications.

### Special Fee

All REX participants pay a \$180 special fee that is applied to administrative costs; however, costs of field and laboratory expenses, compilation of research finds, and program planning and implementation *may* also be added to the special fee. Projects have different arrangements regarding accommodations, meals, ground transportation, and clothing and equipment needs, so special fee amounts vary.

Because REX participants are contributing money and time to research sponsored by the University of Minnesota, a tax-exempt organization, a special fee *may* qualify as a tax-deductible contribution. Participants are advised to seek qualified advice.

REX volunteers contribute their share of the cost of participating in the project and are responsible for travel expenses. Special fees do not cover individual costs to and from the assembly site, medical or other emergencies, or other personal expenses.

### Cancellation and Refunds

Payment of the special fee is nonrefundable unless the research project is canceled by the REX program or the applicant is not accepted as a project participant. If a volunteer withdraws from a project 30 days or less prior to its start, the balance of special fees (if any) will not be refunded unless a replacement can be found. The research project depends on the financial contribution of participants' special fees for advance costs. No refunds or replacements can be made once the laboratory or field project has begun.

### Orientation

Prior to participation, volunteers receive necessary information regarding project objectives, site conditions, laboratory and field activities and techniques, and clothing and equipment needs. Direction and learning continue at the research site.

### Project Expectations

The project leader is responsible for the involvement of the volunteer in the laboratory/field work of the research project. The project leader and REX staff reserve the right to end participation of any volunteer and require that the person leave the research site if he or she is unwilling to do the work, is unadaptable to the field conditions or to the research team, or does not adhere to University of Minnesota regulations and policies.

Though advance planning is always conducted, sometimes unforeseen situations do arise. Understanding, adaptability, and cooperation are therefore essential for all research participants.

### Academic Credit

Academic credit is available for participating in most REX projects. Inquire about earning credit when calling for application materials. Tuition paid for academic credit is **not** deductible as a charitable donation.

## REX Projects for 1995-96

### Animal Science, Biology, Forest Resources, Plant Biology, Soil Science

**REX 0103 MUSHROOM DIVERSITY IN MINNESOTA OLD-GROWTH FORESTS.** This project will characterize a select group of mushrooms (*ectotrophic mycorrhizal* species) to obtain data on fungal biodiversity in Minnesota old-growth and mature forests.

**REX 0104 THE IMPACT OF SOIL FERTILITY ON CROP PRODUCTIVITY.** Responding to the growing importance of vegetable crops in Minnesota, the goal of this soil fertility research is to expand production of crops such as potatoes, field corn, and soybeans.

**REX 0106 EFFECTS OF SEDIMENT ON STREAMS.** Study the effects of sediment (clay) on physical, chemical, and biological processes in streams. By dosing different amounts of clay into artificial streams at the Monticello, Minn., Ecological Research Station, researchers will measure the impact on light penetration, water chemistry, algae, invertebrates, and fish.

**REX 0108 MANAGEMENT AND GENETIC PRACTICES THAT INFLUENCE SHEEP PRODUCTION.** A hands-on opportunity to work with sheep as an animal model. Activities include birthing, identification, shearing, feeding, record evaluation, and experimental data collection.

**REX 0109 IMPACT OF AGRICULTURAL CHEMICALS ON SURFACE AND GROUND-WATER.** Developed in conjunction with the Midwest Initiative on Water Quality, this ongoing project is part of a national program addressing the impact of agriculture on water quality.

**REX 0110 THE INFLUENCE OF NEUROTENSIN ON GASTRIC FUNCTION.** After surgically implanting a strain-gauge transducer in domestic turkeys, neurotensin is infused and intestinal motility monitored to determine the effects of neurotensin on intestinal function.

**REX 0119 EVALUATING GRAPES FOR GROWING IN MINNESOTA.** Learn about the feasibility and difficulties of growing grapes in a cold climate.

**REX 0120 BREEDING AND PRODUCING FRUIT CROPS IN MINNESOTA.** Contribute to the improvement of fruit production in Minnesota by helping researchers develop varieties suited to the climatic conditions of this northern zone.

### Astronomy, Biochemistry, Chemistry, Engineering, Physics

**REX 0201 MULTIPHOTON IONIZATION OF SIMPLE LIQUIDS.** Using lasers and computers, this study gauges the wavelength dependents of multiphoton ionization efficiency in benzene, toluene, and p-xylene.

**REX 0203 SURFACE TENSION OF FREE-STANDING LIQUID-CRYSTAL FILMS.** University physicists have created a simple and highly demonstrative experimental setup that shows the existence of surface tension in free-standing liquid-crystal films (similar to a soap film) and measures it as a function of film thickness (down to 2-layer films; film thickness  $\approx \text{\AA}/\text{layer}$ ) as well as a function of temperature with a resolution of about  $\pm 1\%$ . Volunteers with computer experience preferred.

**REX 0205 ENVIRONMENTAL PROPERTIES OF CHEMICALS: EXPLAINED BY PARTIAL MOLAR VOLUMES AT INFINITE DILUTION?** Researchers plan to test selected scientific ideas by measuring partial molar volumes at infinite dilution for a series of chemicals that exhibit "unexpected" distribution coefficients (from the results of other work on the series of chemicals).

**REX 0206 PROTEIN ENGINEERING OF FATTY ACID-BINDING PROTEINS.** The goal of this project is to take an existing protein and modify it using a combination of genetic engineering and chemical methods to produce a new protein that will catalyze a new chemical reaction.

**REX 0209 SYNTHESIS AND REACTIVITY IN ORGANIC CHEMISTRY.** Researchers are investigating the pathways through which chemical reactions occur and the relationship between structure and reactivity. REX volunteers will make organic compounds using modern spectroscopic tools.

**REX 0212 STRUCTURE AND PROTEIN ENGINEERING.** The Ohlendorf lab studies the structure of large molecules like DNA and proteins. Knowledge of these structures is used to design better proteins and drugs. Current research is on toxic shock protein, dioxygenases, DNA binding proteins, and other proteins imported in cystic fibrosis.

**REX 0215 THE IMPACT OF ROAD INFORMATION/INCIDENT ADVISORIES ON DRIVERS' ROUTE CHOICES.** Find better ways to design traveler advisory messages on radio, TV, and variable message signs. REX volunteers will personally interview commuters at their place of work, tabulate responses in computer files, and possibly analyze responses.

**REX 0216 BEHAVIOR OF HIGH-STRENGTH PRESTRESSED BRIDGE GIRDERS.** Research the application of high-strength concrete to prestressed bridge girders.

**REX 0217 PRECAST CONCRETE MEMBERS SUBJECTED TO EARTHQUAKE LOADING.** Investigate the behavior of several types of connections between precast elements subjected to simulated earthquake loading.

**REX 0220 SUPERCONDUCTIVITY IN ULTRA SMALL STRUCTURES AND THIN FILMS.** Explore the production and evaluation of properties of structures that are smaller than those that can be produced using electron beam microfabrication by itself. Volunteers with basic physics, mathematics, and computer experience preferred.

## Medicine

**REX 0300 TEMPORAL AND SPATIAL EXPRESSION OF GROWTH FACTORS IN REGENERATION.** Relying on in vivo experiments conducted on a rat model, this project seeks to identify cell dialogs/interactions leading to regeneration rather than scarring after injury.

**REX 0301 T-CELLS, CYTOKENICS, AND HOST DEFENSE AGAINST *TOXOPLASMA GONDII*.** *Toxoplasma gondii* causes severe disease in congenitally infected infants and immunosuppressed people. Participants will work with the principal investigator to study the basic metabolism of this parasite as well as mechanisms of host defense against *T. gondii* in mice.

**REX 0302 FAILURE MECHANISMS OF REVISION JOINT REPLACEMENT.** Why does revision total joint replacement not function as well as primary joint replacement? Researchers are identifying the effects of implant motion, particulate wear debris, and bone graft on the ability of bone to grow. Volunteers with experience on IBM PCs and familiar with bone biology and orthopedic surgery preferred.

**REX 0303 MOLECULAR FINGERPRINTING OF CANCER.** Identify the unique genetic determinants of an unusual form of cancer by using a method of DNA fingerprinting to classify molecules.

**REX 0304 CONTINUING STUDIES OF COLD SENSATIONS.** How does the nervous system encode cold sensations? Learn how in a Department of Oral Science research project focused on the different sensations produced by cold stimuli.

**REX 0306 MUSCLE STUDIES: EFFECTS OF HYPERTHYROIDISM ON CERTAIN CHARACTERISTICS OF MUSCLE; MITOSIS IN MATURE MUSCLE, MUSCLE REGENERATION.** Characterize the properties in extraocular muscles that lead to autoimmune attack in hyperthyroidism in one of three studies. Volunteers with basic biology, computer, and microscope experience preferred.

**REX 0307 MUSCULOSKELETAL MODELS FOR COMPUTER SIMULATION OF WALKING.** Evaluate an existing model of the lower extremity musculoskeletal system and incorporate findings into use for computer-generated simulations of gait. Volunteers familiar with UNIX computers, human anatomy, and a basic understanding of physics/mechanics preferred.

**REX 0308 NEUROBIOLOGY OF PAIN AND OPIATES.** In order to develop analgesic agents without addictive properties, this research project employs a variety of techniques to determine the chemistry, anatomy, and pharmacology of pain transmission.

**REX 0310 CELL INTERACTIONS IN THE INITIATION OF MAMMALIAN MUSCLE REGENERATION.** Study the regulation of satellite cell proliferation and differentiation in cell/tissue cultures.

**REX 0318 AUTOIMMUNE INNER EAR DISEASE.** Researchers' goal is to determine if some forms of inner ear disease are autoimmune in nature, that is, if they are caused by a self-directed attack on the ear by their immune system.

**REX 0320 ALCOHOL AND DEGENERATIVE DISEASES.** Contribute to the development of lab tests for quantification of long-term alcohol consumption.

**REX 0321 QUALITY OF LIFE AFTER HEART SURGERY.** Evaluate factors contributing to recovery and quality of life after open-heart surgery in this study funded by the National Institutes of Health. Assist with information gathering, interpretation, and analysis; review literature; contact hospitals and other offices to monitor condition of patients.

**REX 0322 THE INFLUENCE OF ALUMINUM TOXICITY UPON EMBRYONIC BONE DEVELOPMENT.** Examine the influence of aluminum upon local versus systemic factors that are known to be important in embryonic bone development, using the chick embryo as the experimental model.

**REX 0324 DETERMINATION OF INCOMPETENCY.** Help determine the criteria and events surrounding decision making when an elderly person can no longer care for his or her person and possessions.

**REX 0329 BIOMEDICAL RESEARCH ON SKELETAL MUSCLE DISORDERS.** Join this research of muscle diseases (myotonia, periodic paralyses, and malignant hyperthermia) and general skeletal muscle physiology. Participate in laboratory work, including preparation of solutions and electrodes, dissection of biopsy specimens, and data collection and analysis.

**REX 0332 MEASUREMENT OF O<sub>2</sub> AND pH IN MUSCLE.** Help researchers measure and understand interventions that will alter O<sub>2</sub> and pH in the muscle of humans suffering from chronic pain of muscular origin.

**REX 0335 ANALYZING HEART IMAGES OBTAINED WITH MAGNETIC RESONANCE IMAGING.** Examine the functional and morphologic status of the heart from magnetic resonance images. Analyze data using advanced but user-friendly software.

**REX 0336 NEUROIMAGING STUDIES OF BRAIN FUNCTION AND DYSFUNCTION.** Help identify brain areas involved in specific cognitive functions and possible sites of dysfunction in psychiatric disorders.

**REX 0337 REGIONAL RURAL INJURY STUDY.** Funded by the Centers for Disease Control, the primary purpose of this project is to identify the magnitude and potential risk factors of the injury problem in rural populations in a five-state region representative of the major types of agricultural production in the United States.

## Mental Health & Nutrition

**REX 0401 NUTRITION EDUCATION DECISION CASES FOR 4-H: EFFECTIVENESS OF CASE METHODS.** Assist in the development and evaluation of nutrition education decision cases for use in elementary and secondary schools or 4-H. Though of special interest to teachers, this project is open to anyone meeting qualifications.

**REX 0403 BETTER HEALTH AT LOWER COST.** This four-year research project attempts to improve the quality of life for frail elderly people and reduce their need for expensive care in hospitals and nursing homes.

**REX 0406 ELDER ROLE MODELS IN LONG-TERM CARE.** Through analysis of intensive life-history interviews, this project focuses on understanding the experience of successful aging, particularly among fragile elders.

**REX 0408 ALZHEIMER'S DISEASE CAREGIVER TRAINING PROGRAM.** The aim of this project is to develop an educational program with formal classes and structured practicum for spouses of individuals with early or moderate Alzheimer's disease.

**REX 0410 NUTRITION AND ORAL HEALTH OF THE ELDERLY.** By interviewing nursing home residents and working with nurses, nutritionists, medical records, and other sources, researchers and volunteers gather data to understand the connection between good nutrition and good oral health.

**REX 0413 NEURAL MECHANISMS OF HYPERALGESIA.** This research team is studying the spinal neural mechanisms that contribute to nociception in rats. The goal is to determine whether excitatory amino acids or opiates can modulate hyperalgesia produced by intraplantar injection of capsaicin.

**REX 0419 PERCEPTIONS OF FACTORS THAT CAUSE SUCCESS OR FAILURE IN WEIGHT REDUCTION.** It might be that weight loss (plus exercise) could drastically reduce many of the most common and expensive diseases, but there is no agreement on how to prove this. This study attempts to identify the weight reduction measures employed by targeted populations that have succeeded (or failed).

**REX 0420 DOUBLE BLIND STUDY OF THETA TRAINING IN THE NEUROFEEDBACK TRAINING OF ALCOHOLICS.** Receive training in Quantitative EEG technique, including measurements and electrode application, to assist the principal investigator in QEEG acquisition and data analysis. Volunteers with interviewing and computer skills as well as experience working with alcoholics or biofeedback preferred.

**REX 0421 CLINICAL DESCRIPTION OF PARAPHRENIA.** Does paraphrenia exist in the U.S.? Join a team of researchers at the Minneapolis Veterans Medical Center as they look for answers to this question.

**REX 0422 MINNESOTA GERIATRIC EVALUATION AND MANAGEMENT (GEM) PROGRAM.** This project attempts to improve the quality of life for frail elderly people and reduce their need for expensive care in hospitals and nursing homes. Volunteers with good communication and interpersonal skills, computer literacy, and some previous medical experience preferred.

**REX 0423 GETTING THE MESSAGE ACROSS: DISSEMINATING CLINICAL PRACTICE GUIDELINES.** Evaluate the most effective strategies for disseminating clinical practice guidelines to nursing staff and other clinical personnel. Strategies include a continuing education program with ongoing consultations and interventions that focus on skill development and improved compliance with clinical guidelines.

**REX 0424 MINNESOTA FAMILY WORKSHOP: INTERVENTION FOR ALZHEIMER'S FAMILIES.** Join a team of researchers testing the effectiveness of a seven-week psychoeducational program for family members caring for dementia patients.

## Archaeology, Geography, History, Sociology

**REX 0502 RELATIONSHIPS IN ADOPTIVE FAMILIES.** Examine variations in openness in adoptive family relationships and the consequences of contact between the adoptive and birth parents for the adopted child, the adoptive parents, and the birth mother.

**REX 0504 HISTORICAL ATLAS OF THE ST. PAUL CENTRAL BUSINESS DISTRICT.** Using Geographic Information System (GIS) technology, assist in the creation of a series of maps showing the development of the central business district of St. Paul.

**REX 0507 MISSIONARIES AND THE CONQUEST OF HONDURAN INDIANS.** Assistance is needed to transcribe and translate 16th- and 17th-century Spanish documents about early colonial life of the Honduran Indians and the Mercedarian Order mission system.

**REX 0511 YOUTH DEVELOPMENT STUDY.** A longitudinal study of 1,000 St. Paul youths examines the developmental and mental health implications of working during high school. Along with questions about work, the survey taps other related aspects of adolescent life, including family, peer, and school experiences.

**REX 0512 THE EVOLUTION OF THE SPANISH PRESS UNDER DEMOCRACY.** While contributing to the organization of a recently acquired collection of newspaper clippings and popular magazines published in Spain in the 1970s and 1980s, a REX volunteer can learn about politics, culture, society, and religion in Spain as it developed into a modern democracy after the death of Generalissimo Francisco Franco in 1975. Reading knowledge of Spanish required.

**REX 0516 CONFIGURING FRENCH IDENTITY: TEXTS, IMAGES, INSTITUTIONS.** Identify and analyze texts and images that represent the various ways French national identity was constructed during the classical, Enlightenment, and modern periods. Reading knowledge of French required.

**REX 0517 A MAP OF MARINERS IN 18TH-CENTURY SPAIN.** Evaluate how well supply met demand in the market for 18th-century maritime labor by researching the records of nearly 38,000 Spanish mariners registered between 1737 and 1739. Reading knowledge of Spanish required.

## Business, Ethics, Law, Management

**REX 0603 THE FLAT PANEL DISPLAY: U.S. COMMERCIALIZATION OF A NEW INDUSTRY.** Although the flat panel display was invented in the United States, Japanese firms successfully commercialized the display and gained control of 95 percent of the market. Can the U.S. reestablish itself within this particular market? Participants with a background or interest in business-government relations preferred.

**REX 0604 RACIAL DIFFERENCES IN HOME OWNERSHIP AND MORTGAGE DEBT.** Alarming findings from a national health and retirement survey show that African-Americans and Latino respondents with the same income as whites have substantially less net worth than white respondents. Volunteers will help determine why these disparities exist.

**REX 0605 NETWORK DIFFERENCES IN GROUPS.** Explore why some groups succeed and others fail. In particular, volunteers will examine performance differences in groups due to contrast within the groups' social networks.

**REX 0606 DO WE KNOW WHO OUR FRIENDS ARE? ACCURATE PERCEPTION OF SOCIAL NETWORKS.** Research why employees often are unable to distinguish accurately who their friends are within the workplace.

**REX 0607 IMPACT OF PROCEDURAL JUSTICE ON EMPLOYEE BEHAVIOR.** Investigate the impact of procedures on individual self-esteem within the workplace.

**REX 0608 ORPHAN MEDICAL: AN INTRODUCTION TO PHARMACEUTICAL MARKETING.** Gain hands-on experience with various medical marketing activities as well as a behind-the-scenes view of drug development. Explore market research, new product opportunity assessment, pricing analysis, and medical writing.

## Communication, Education, Languages

**REX 0701 THE GERMAN LANGUAGE IN MINNESOTA.** In an ongoing project, the speech of Minnesota natives who speak German is recorded for a linguistic analysis of the changes that have taken place in the language since it was imported into Minnesota.

**REX 0703 THE ORIGIN OF ENGLISH WORDS.** This project is part of a University of Minnesota effort to compile a new etymological dictionary of English words.

## Art, Literature, Music

**REX 0801 CITYSONGS: A TWIN CITIES DEMONSTRATION PROJECT IN MUSIC.** CitySongs seeks to promote healthy psychosocial development among diverse youth via popular music participation.

**REX 0802 2D ON 3D.** This project deals with flat or two-dimensional images on three-dimensional form. The images change proportion as the viewer changes position.

**REX 0803 THE BIG TOMORROW: HOLLYWOOD AND THE POLITICS OF MULTICULTURAL AMERICA.** Explore how films from the Great Depression through the early Cold War era were far more engaged with insurgent social movements and the problems confronting a multicultural society than scholars previously recognized. Research major industry trade journals searching for information on key films and shifting audience tastes, particularly the reasons why film noir became so popular after World War II.

## *Sampling of tentative projects for summer 1996*

**REX 0102** Researching Small Fruits in Northern Minnesota

**REX 0105** Home Lawn Fertilization in the Twin Cities

**REX 0107** Forest Biodiversity and Succession

**REX 0124** Insect Pollination in Prairies

**REX 0128** Function of Male Reproductive Effort in Monarch Butterflies

**REX 0219** Computer Simulations of Solids and Liquids

**REX 0224** Explore Engineering

**REX 0340** 3D Instructional Computer Program for Medical Students

**REX 0341** Dietary Fiber Therapy

**REX 0503** An Interpretative History of Duluth

**REX 0518** Geography of Everyday Things

**REX 0707** Language and Literacy of American Indian First-Grade Students





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# 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.

**CEE Distinguished Teaching Awards**—Students and staff are invited to make nominations for the CEE Distinguished Teaching Award. The award is given annually to teachers providing credit and noncredit instruction offered or cosponsored by Continuing Education and Extension/University College. Nomination forms are available from the Dean's Office (624-2517). Nominations are due by Mar. 15; awards are made in the fall.

## Funding of the Extension Classes program

While the state legislature has begun to help fund Continuing Education and Extension/University College, 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.

## Student services fee

Continuing Education and Extension/University College students registered for one credit or more may elect to pay the student services fee if they wish to use the services covered by the fee. Students may

obtain a written fee statement at the Student Relations Unit, 150 Williamson Hall, on the Minneapolis campus. If you have questions, contact the Student Relations Unit (625-5333).

Two student services (health service coverage and use of recreational facilities) may be elected and paid separately; see descriptions below.

If you are interested in hospitalization insurance, contact Boynton Health Service, 624-0627.

## Campus activities, services and facilities

### *Art rentals, Frederick R. Weisman Art Museum (625-9495)*

The Frederick R. Weisman Art Museum (formerly the University Art Museum) maintains a rental collection of framed original prints, watercolors, photographs, and drawings. Extension students with a University identification card and current fee statement may rent art works for use in the home or present place of residence. Art rental is located in the museum store at the museum's main entrance off the southeast corner of the pedestrian level of the Washington Avenue Bridge.

Hours of the new Frederick R. Weisman Art Museum are:

|                            |                   |
|----------------------------|-------------------|
| Tuesday, Wednesday, Friday | 10 a.m. to 5 p.m. |
| Thursday                   | 10 a.m. to 8 p.m. |
| Weekends                   | 11 a.m. to 5 p.m. |
| Closed Mondays             |                   |

All exhibitions are free and open to the public. Posters, catalogs, t-shirts, handmade jewelry, cards, and an array of unique gift items are available in the museum store. Hourly parking is available in the museum ramp. Call 625-9494 for more information.

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## General Information

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### *Recreational Sports Facilities and Programs*

An Extension student may use the Recreational Sports facilities and programs by purchasing a Participation Permit each term at one of the Recreational Sports offices: University Recreation Center (Minneapolis campus) or 104 St. Paul Gymnasium (St. Paul). Call 625-6800 or 625-8283 for the latest fee amounts. Proof of registration is necessary for purchase (see below).

To purchase a permit at reduced rates, eligible students must be enrolled through Extension for six or more credits for that quarter and be admitted to a degree-granting program at the University. Students must present their paid fee statement (confirmation of registration) and proof of admission to a degree program, available from the CEE Counseling Office, 314 Nolte Center, 625-2500.

Students who cancel classes must surrender their permit, which becomes invalid immediately upon cancellation.

Students must present the Participation Permit each time they use the facilities. The sports facilities include swimming pools, fitness centers, handball/racquetball courts, squash courts, tennis courts, gymnasiums (basketball, volleyball, badminton) sports fields, etc.

### *Athletic tickets (624-8080)*

University Extension students taking credit classes are eligible to purchase student season athletic tickets for men's intercollegiate athletic events (credit requirement is subject to change).

Reserved tickets at reduced rates with specific seat assignments are available for football beginning in August. Hockey season tickets will go on sale starting in September; reduced-rate reserved season tickets will be available. Basketball season tickets will be reduced-rate reserved seating; tickets go on sale late in September.

For details on purchasing student tickets, please call the Athletic Ticket Office in Mariucci Arena, 624-8080. Hours are 9 a.m. to 5 p.m. Monday through Friday. Proof of registration is required. Ticket prices and regulations on eligibility and availability are subject to change.

All tickets purchased are nontransferable. If a student's classes are canceled by either the University or the student, athletic tickets must be returned to the Athletic Ticket Office.

Regulations governing purchase, transfer, and cancellation of the above tickets are available on request from the Athletic Ticket Office (624-8080).

Extension students may NOT pick up fee statements in advance at Westbrook Hall. Register as early as possible by mail to insure you receive your fee statement back in time to pick up tickets. You also may choose to register and pay fees in person so you receive your fee statement immediately.

### *Women's intercollegiate athletic tickets (624-8080)*

Any Extension student, with a current I.D. and Extension fee statement, may purchase tickets for women's intercollegiate athletic regular season events at the student price of \$3. Tickets are available at the door one hour before any basketball, gymnastics, soccer, softball, swimming/diving, track and field, and volleyball event. Season ticket passes may be purchased at the athletic ticket office in Mariucci Arena (east entrance). Youth group discount tickets may also be purchased at this ticket office.

There is no admission charge to women's cross country, golf, and tennis events.

Call 624-8080 for ticket information or the Gopher Sports Hotline at 626-STAT (7828) for 24-hour recorded updates and results.

### *Campus access for students with disabilities*

The University of Minnesota has available accessibility maps for the Minneapolis and St. Paul campuses. The maps, known as the "Campus Accessibility Guide," indicate disability parking areas, building entrance levels, elevators, curb cuts, and accessible buildings.

Those who would like copies of the guides should telephone Disability Services at 626-1333. Similar maps are located in the *Student-Staff Directory*.

Telecommunication devices for the deaf (TDDs) are available for use by students with hearing impairments at the following locations: Disability Services, 30 Nicholson Hall, 626-1333, and 12 Johnston Hall, 624-4037, weekdays until 4:30 p.m.; Coffman Information Center, 138 Coffman Union, 625-4177, evenings and weekends until 12 midnight; St. Paul Campus Office for Student Affairs, 190 Coffey Hall, 625-9225, until 4:30 p.m. weekdays. Other locations are listed in the student-staff directory under TDD Network.

For information about the message relay system for people with hearing impairments, call the Minnesota Relay Service, 297-5353.

For blind students, tape and braille materials also are available from the Communication Center of State Services for the Blind, telephone 642-0500. Assistance on campus is available from Disability Services, 30 Nicholson Hall, 626-1333.

Wesbrook Hall is an accessible building. The ground-level entrance is on the right of the main entrance on Pleasant Street. Inside the building, go left to the elevator. Rest rooms are to the right on the ground floor.

### *Disability services*

The University's mission is to provide optimal educational opportunities for all students including those with physical, sensory, learning, and/or psychological disabilities. The University recognizes that disabled students sometimes have unique needs that must be met for them to have access to campus programs and facilities. In general, University policy calls for accommodations to be made on an individualized and flexible basis. It is the responsibility of students to seek assistance at the University and to make their needs known.

One of the first places to seek assistance is at Disability Services (DS). This office is provided by the University of Minnesota to promote program and physical access, which means ensuring the rights of disabled students and assisting the University in meeting its obligations under federal and state statutes. DS provides direct assistance such as information, referral, support, and academic accommodations (i.e., interpreters, readers, test accommodations, etc.) for enrolled and prospective students, as well as consultation to faculty and staff to ensure access to their programs and facilities. The office will also assist disabled students in obtaining services from other University or community resources. Educational specialists are available to assist students with disabilities as well as serve as liaisons between the University and the Division of Rehabilitation Services. For more information, contact Disability Services, 30 Nicholson Hall, 626-1333 (voice or TDD).

### *Computer purchases*

The University of Minnesota Bookstores computer department has contracts with major computer hardware, software, and accessory companies to provide products at reduced prices. These prices are below the prices normally found at retail computer stores, but are available only to students, faculty, staff, and departments that are affiliated with the University of Minnesota.

The products that you can purchase from the University of Minnesota Bookstores computer department are tested and supported through the University. This ensures that the computer equipment and software you purchase is compatible with all University requirements and services.

You are eligible to participate if you are enrolled in a course of study that will lead to a degree from the University of Minnesota. Contact the computer

department at 625-3854 for details on eligibility and restrictions.

### *E-mail accounts*

Access to the University's electronic mail and the Internet are part of Continuing Education and Extension/University College's (CEE) commitment to provide effective communication for Twin Cities CEE students taking University credit courses. This service is provided at no charge to Extension students for the term they are actively enrolled in University credit courses. Along with e-mail, this access will enable students to access other information resources on the campus-wide network and Internet. **Please note:** It takes up to a week (7 full days) from the date of registration to create a new e-mail account on the University's system. *No exceptions.*

Students can access the University's Central Mail System's Maroon and Gold mail servers from any of the University's computer facilities or from their own microcomputer from home. Individual account holders on the University's e-mail system can store up to 2MB (megabytes) of information free of charge. E-mail accounts are frozen, however, until students activate their accounts by entering certain personal information on line. Student who have used their e-mail accounts will not have to activate them again.

Please note that access to the University e-mail system is a privilege and not an entitlement. Computing services, including e-mail, may not be used for illegal or unauthorized purposes including but not limited to, harassment; destruction of or damage to equipment, software, or data belonging to others; unauthorized copying of copyrighted materials; or the disruption or unauthorized monitoring of electronic communications. Using e-mail to participate in illegal acts is itself illegal and may be subject to prosecution by state and federal authorities. E-mail accounts and passwords are assigned to individuals and are not to be shared. Use of e-mail for private business purposes unrelated to the University is unauthorized. Any misuse of the system may result in loss of privileges.

**Activating a Student E-Mail Account.** Student e-mail account names follow this format: the first four letters of the student's last name followed by a unique four-digit number (example: abcd1234@gold.tc.umn.edu). For security reasons, all new student accounts are "frozen"; accounts cannot be used until students activate them. To activate accounts, students need to go to any computer facility on campus (see list below) and access the *Student E-Mail Account Initiation* section of Internet Gopher. For most students, activating their accounts will be easy and quick by simply follow-

## General Information

ing the five initiation steps described below. *Students should remember to use the Tab Key to go from one data field to another; they should use the Enter key when they have completed entering information.*

**1. Student I.D. Number.** Extension students who are new to the University must be assigned a student I.D. number. This process takes 24 hours. Students may call (612) 625-3333 or write Extension Classes at 101 Westbrook Hall, 77 Pleasant Street S.E., Minneapolis, MN 55455, to find out their student I.D. number. Students who call must be prepared to provide specific identification data for security purposes.

**2. Social Security Number.** The e-mail system requires that students enter their social security numbers for verification purposes only. In order to prevent someone else from accessing accounts, this information must be entered. The social security number will not be used for any other purpose or be accessible to any other system.

**3. Date of Birth.** An example birth date is included in the initiation form. Replace the example with your own date of birth in the same format as the example: MM/DD/YYYY.

**4. Passwords.** All passwords must follow the following rules: (1) password must be 6 to 8 characters long; (2) password must be a combination of letters and numbers; and (3) password must not be identical to user's name.

Students need to press the Enter key when they have completed entering all the required information. Once the system has verified that the information is accurate, it will respond with a message.

**Locating Campus Computer Facilities.** There are computer facilities in many locations around campus that are available to Extension students. *The hours for these facilities vary, so students are urged to call the location before going there.*

*West Bank:* Blegen Hall 455 (626-7778)

*East Bank:* Elliott Hall 121 (624-0866); Folwell Hall 14 (625-4896); Lind Hall 26 (626-0856); and Walter Library (626-1899).

*St. Paul:* Classroom Office Building 135 (624-9226); Classroom Office Building 17 (626-1252); McNeal Hall 305 (624-5367); and Central Library B50 (624-3269).

**Accessing E-Mail from Off-Campus Location.** To access an e-mail account from off campus, such as their home, students need a microcomputer or terminal, a modem, and communications software. Computer and Information Services supports ProComm, TinCan, and Telnet communications software and POPmail. Copies of these programs are available free in 152 Shepherd Labs on the east

bank (telephone 626-4276).

Central Modem Pool numbers for access to all University systems): 626-1200 (for 1200 bps modems); 626-2400 (for 2400 bps modems); and 626-9600 (for 9600 and higher bps modems).

**Accessing the E-Mail Help Line: 626-7676.** The Help Line is staffed Monday through Friday from 9 a.m. to 10 p.m. Walk-in help is also available during open hours in the campus public computer facilities. *If students find they cannot activate their accounts, they should contact the E-Mail Help Line for assistance.*

### *Health service (625-8400)*

Students registered for at least one Extension class and spouses of students may use Boynton Health Service on a fee-for-service basis. Students who are admitted to a University of Minnesota degree or certificate program and who are registered for six or more credits have the additional option of enrolling in Boynton's Extended Coverage Benefits Plan. This prepaid plan entitles students to receive certain outpatient services at no charge and to receive others at reduced cost.

Extended coverage may be purchased at the cashier's window, third floor, Boynton Health Service between 8:30 a.m. and 5 p.m. (Wednesdays, 10 a.m. to 6:30 p.m.). Be sure to bring your Extension fee statement and proof that you are in a certificate or degree program (your day school transcript or a letter from your adviser). Coverage must be purchased before the end of the second week of the quarter or first week of summer terms.

Students who pay the extended coverage fee receive general medical care and laboratory tests at Boynton at no charge. Partial charges are made for routine physical exams, annual dental exams, and some specialty care. Prescription drugs, eye glasses, contact lenses, and dental care are available at Boynton's normal low prices. Co-payments are charged for mental health services including crisis counseling. X-rays and minor surgical procedures are charged to students for collection from their insurance. Any balance after insurance is covered by the extended coverage fee with no additional out-of-pocket expense. Students who do not have insurance must pay full charges for these services.

The Extended Coverage Benefits Plan does not cover hospitalization or surgery. Extension students who have paid for extended coverage and are registered for six or more credits may purchase the University-sponsored hospitalization insurance offered to day school students.

To obtain brochures describing both of these plans in greater detail, stop by 101 Westbrook Hall or call 625-3333 and ask that the Boynton Health Service literature be sent to you. For specific questions concerning

the Extended Coverage Benefits Plan, call 624-1471. For insurance questions, call 624-0627.

Boynton Health Service is located on the East Bank at 410 Church Street S.E. Hours are 8:30 a.m. to 5 p.m., Monday, Tuesday, Thursday, Friday; 10 a.m. to 6:30 p.m., Wednesday; closed holidays.

When the Health Service is closed, emergency care is available at the Emergency Department of University Hospital. Charges for after-hours emergency care are the student's responsibility. Follow-up care after an emergency must be obtained at Boynton to be covered.

### *Libraries (624-4552)*

The University of Minnesota-Twin Cities Libraries contain more than 5 million catalogued volumes. In addition to books and periodicals, the libraries have substantial holdings of government documents, manuscripts, archives, audio recordings, videotapes, and electronic files and databases.

*Humanities and social science collections:* The main humanities and social sciences collections are in Wilson Library on the West Bank and include American studies, anthropology, art, business, film, geography, history, language, literature, philosophy, political science, religion, sociology, and women's studies. The collections for education, library science, and psychology are found in Walter Library on the East Bank. The collections in design, vocational education, family social science, rural sociology, and textiles are found in the St. Paul Central Library on the St. Paul campus.

*Science collections:* The main science and technology collection, including chemistry, engineering, geology, and physics is housed in Walter Library. The health science collections, including allied health, dentistry, medicine, mortuary science, nursing, pharmacy, and public health are in the Bio-Medical Library in Diehl Hall on the East Bank. The agricultural and biological sciences collections are found in the St. Paul Central Library on the St. Paul campus.

Many *subject collections* are located in other buildings, as well. Call for locations on materials in horticulture, architecture, entomology, mathematics, forestry, plant pathology, law, journalism, maps, music, machine-readable data files, government publications, biochemistry, natural history, veterinary medicine, East Asia, South Asia, and the Middle East. Special collections exist for children's literature, social welfare history, and other areas.

*Reference and research service points* are located in major library buildings: for education, library science, and psychology, Walter Library first floor; for humanities and social sciences, Wilson Library, first floor; for business, Wilson library, second floor; for government publications, Wilson Library,

fourth floor; for bio-medical subjects, Diehl Hall, third floor; for science and engineering, Walter Library, second floor; and on the ground floor of the St. Paul Campus Central Library.

*Terminals to access LUMINA*, the University Libraries on-line catalog, are available in all of the libraries. It is also possible to dial in to LUMINA using a personal computer and modem. To connect to LUMINA within the Twin Cities area code 612, dial 625-6009 for up to 2400 baud or 624-7359 for 9600 baud. Long distance, dial 1-800-LUMINA. For hardware or software problems, call 626-5592.

*Specialized services* of University Libraries include in-depth reference service, library instruction, computer-literature searching, inter-library borrowing, and photocopying.

Continuing Education and Extension/University College students are encouraged to use library services. A current University ID card or current fee statement (the student's confirmation of registration) is needed to borrow materials. For library hours, call 624-4552.

### *Language laboratory*

Some Extension classes may include recommended audio tape listening at the University Library Learning Resources Center. Cassette tapes are available at the center in the basement of Walter Library on the Minneapolis East Bank campus. Extension students enrolled in courses which require audio tape listening may borrow audio cassettes for out-of-building use. For details concerning tape borrowing privileges please call the center at 624-1584.

Learning Resources Center hours: 9 a.m. to 9 p.m., Monday through Thursday; 9 a.m. to 5 p.m., Friday; 10 a.m. to 2 p.m., Saturday; and 5 p.m. to 9 p.m., Sunday.

### *Locker rental service*

Full-size and half-size lockers are available for rental by the quarter. Deposit cards must be purchased and are available on the campus you are renting a locker: On the East Bank, stop at the Coffman Service Center; on the St. Paul campus, go to the St. Paul Cashier Office, 107 Coffey Hall (except for lockers in the Classroom Office building, contact the Coffman Service Center); and for the West Bank, purchase your deposit card at the West Bank Bursar's Office.

Locker rental offices are at the Service Center in Coffman Memorial Union for the East Bank, the Skyway Service Center for West Bank, and on the St. Paul campus at 213 Agricultural Engineering and 32 McNeal Hall. For more information, call the East Bank main office at 625-0981 for East Bank and St. Paul lockers; call 624-6338 for West Bank locker rental information.

## General Information

The Coffman Service Center, on the ground level of Coffman Memorial Union, offers several additional services: postal services, MTC monthly pass and commuter ticket sales; parking coupons; discount movie passes; discount entertainment passes; and campus bus (Route 13) punch cards.

### Lost and Found

For lost and found assistance, check the lost and found office in the building where you may have lost items. For additional help or information, contact one of the main lost and found offices: Coffman Information Desk, 625-4177, for East Bank; 100 West Bank Skyway, 624-6338, for West Bank; and the Coffey Hall Post Office, 625-8284, for the St. Paul campus.

### Parking facilities

Parking for Extension students is available in several University public parking facilities, and in some contract facilities after 4:30 p.m. on weekdays. Parking rates vary by facility depending on proximity to campus and the facility type. Please call 626-PARK (7275) to request a parking map and rates.

When special events such as concerts and athletic games are occurring on campus, special event rates go into effect at some facilities. **However, Extension students may park in Lot 33 on the East Bank (at the intersection of Fifth St. S.E. and 17th Ave. S.E.) after 4:30 p.m. for the regular daily rate if they have a special event hang tag.** Call Extension Classes at 625-3333 for information on obtaining a special event hang tag.

Please call Parking Services at 626-PARK (7275) if you need additional parking information.

**Disability parking**—Some of the parking facilities and metered areas have designated disability parking spaces. A state-issued permit is required to use these spaces. Patrons are charged the same parking rates as other patrons, except for metered areas which are free for vehicles bearing a state-issued permit. For more information on parking, call the State of Minnesota at 296-6911 or the Office for Students with Disabilities at 624-4037.

**Student contract parking**—Students are eligible for contract parking through either a commuter lottery for off-campus students or a residence hall lottery for residence hall students. Spaces are re-assigned each quarter. For commuter lottery information, call Parking Services at 626-PARK.

**Motorist Assistance Program (M.A.P.): Telephone 626-PARK**—Hours: 7 a.m. to midnight, Monday through Thursday, and until 10 p.m. Friday. University students, employees, and visitors on the Twin Cities campus in *University parking facilities only* may use M.A.P. free of charge. Ser-

vices include unlocking vehicles, jump starts, changing flat tires, and transportation or referrals to a service station for problems M.A.P. cannot handle. Service is currently not available on weekends or official University holidays.

### 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 to call other University numbers but cannot be used for placing off-campus calls. To call a University number from these phones, dial the last five digits of that number. To call University Information, simply dial "O" for Operator. (University Information is open weekdays from 7:45 a.m. to 4:30 p.m.) **To report any emergency, dial 911.** This 911 emergency number is answered 24 hours a day.

A campus phone is located in the lobby of Wesbrook Hall.

### Police services

The University Police Department is your full-service law enforcement agency for the campus community, available to Extension students and others for responsive crime control, emergency, and other related public service and assisting roles.

Strategic priorities of prevention, interception, and investigation are implemented by almost one hundred employees, including over forty security monitors who are University students providing building security and escort services. Sworn officers are extensively trained, certified according to state standards, and completely authorized agents of the criminal justice system. You are urged to help them help you—report crimes, take advantage of informational and prevention programs by the department, and by all the means that can be achieved together—protect yourself. Contact University Police from any campus phone by dialing the appropriate telephone numbers listed below:

**Police-Fire-Medical Emergency (only) .... 9-1-1**  
**Escort ..... 624-WALK**  
Non-urgent contacts (dispatcher) ..... 624-7828  
Chief of Police ..... 624-2575  
All other (including program requests) ..... 624-3550

### Publications

#### Info

*Info*, a newsletter for University Extension students, is published monthly (except May, 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 624-2388 (birth dates required for coding purposes).

### **Student-Staff Directories**

University student-staff directories are available at Twin Cities campus bookstores to Extension students with a current paid fee statement. The directory contains phone numbers, addresses, and e-mail addresses of University offices, faculty, and staff members, and phone numbers and addresses of Twin Cities campus day students. The directory also is available to e-mail users through Gopher.

### **The Minnesota Daily**

The University of Minnesota student newspaper, *The Minnesota Daily*, is available on campus Monday through Friday during academic quarters and by mail subscription. The *Daily* covers campus and community news and has an arts and entertainment section on Thursdays, and an international section on Wednesdays. Subscription rates (subject to change) are \$22 a quarter for fall, winter, and spring; \$15 for summer sessions; and \$80 a year (150 issues). The *Minnesota Daily*, University of Minnesota, 2301 University Ave. S.E., Minneapolis MN 55414 (627-4080).

### **Internships and Community Service (OSLO)**

The Office for Special Learning Opportunities (OSLO) maintains listings of internship and community service opportunities for students in all programs of study. Placements are available in a wide variety of fields, including government, business, human services, science and technology, health care, ecology, education, the arts, broadcasting, publishing, and more. In some cases, it is possible to earn credit for these experiences, either through taking a course that requires a field experience or through carrying out a directed study project under the direction of a faculty member. Students can discuss these options with an OSLO adviser in 220 Johnston Hall (624-7577).

### **Concerts and Lectures**

Northrop Auditorium has been a major source of entertainment and cultural outreach for the University of Minnesota for 65 years. Diversity reigns in its year-round programming. The Northrop Dance Season presents ballet, contemporary, and cultural dance companies from all over the world, those which are currently the most exciting artistically. The 1995-96 season includes Israel's Batsheva

Dance Company, the lyrically modern Paul Taylor Dance Company, a rare U.S. appearance by the Cuban National Folkloric Dance Ensemble, and a new dance/theater production by Urban Bush Women. Also on the season are Brazil's Balé Folclórico de Bahia, the fast footwork of Rhythm in Shoes, the San Francisco Ballet and The Joffrey Ballet—both accompanied by a full orchestra—and the innovative Feld Ballets/NY.

Northrop will bring a new holiday entertainment experience to Minnesota this year: Ballet West's *Nutcracker*. The third year of the Northrop Jazz Series will feature more masters of jazz. The 1995-96 Discover Series, co-presented by Northrop Auditorium and Walker Art Center, will show new directions in performance. A lively program of free musical entertainment is offered each summer, also.

For more information, call the University of Minnesota Arts Ticket Office (612) 624-2345.

### **Student Employment Center**

Undergraduate students enrolled for six or more Extension credits and graduate students enrolled for three or more Extension credits may use the University's student employment services. The Student Employment Center posts on- and off-campus job vacancies on bulletin boards outside the office in 120 Fraser Hall. After review of eligibility and qualifications, students may be referred to the employer. The employer makes the hiring decision. Student service is offered 8:30 a.m. to noon and 12:30 to 4 p.m. weekdays. (Job listings are posted outside the office and may be viewed evenings.) Proof of registration is required. For more information and complete details on eligibility, contact the Student Employment Center, 120 Fraser Hall, on the Minneapolis campus (624-8070).

### **Theatre**

Generations of University of Minnesota students have attended play performances at University Theatre. Whether in the modern four-theatre facility of Rarig Center or on board the popular Minnesota Centennial Showboat (now under renovation), University Theatre audiences see the brightest young talent in the Twin Cities. Performances are offered throughout the year and ticket prices are \$5 to \$9. Extension students with proof of registration (a current fee statement) are eligible for discounts. Information about current offerings is available by calling the University Arts Ticket Office at 624-2345.

### **Transportation between campuses (bus)**

Transportation between the **Minneapolis and St. Paul campuses** is available seven days a week on special white or maroon-and-gold buses marked "Route 13." The West Bank terminal is in front of

Blegen Hall and the main East Bank campus terminal is in front of Jones Hall (intersection of Pleasant Street S.E. and Pillsbury Drive S.E.). The St. Paul terminal is adjacent to the St. Paul Student Center. Buses leave these terminals at 5-minute, 10-minute, 20-minute, and 30-minute intervals on weekdays and at 20-25 minute intervals on week nights (from 6:45 p.m. to 9:05 p.m.).

There is no charge for riding these buses unless one enters or exits at stops located off campus. The current fare at off-campus pay stops is 85 cents (\$1.10 during rush hours, Monday through Friday from 6 a.m. to 9 a.m. and 3:30 p.m. to 6:30 p.m.) Reduced-fare punch cards are available at the student unions, transit services office, and bursar offices. Fares are subject to change. Call Transit Services at 625-9000 or check pocket schedules for current information.

The Route 13 campus buses also stop at the Huron Blvd. Parking Complex, the Recreational Sports Complex on University Ave., and at the Fairgrounds Parking Lot.

Transportation is also available between the **East Bank and West Bank**. Service is available evenings on the Route 13-S buses at 45-minute intervals between Blegen Hall on the West Bank and Jones Hall/Eddy Hall on the East Bank. East Bank-West Bank bus service also is available during the evening at 44-minute intervals on Route 13-W buses operating between Blegen Hall and Lyon Lab/Amundson Hall on Washington Avenue near Church Street.

Current schedule information is posted at each terminal and pocket schedules are available on Route 13 buses, at the student unions, and at the new U of M Transit Services office in the new Washington Ave. Parking Ramp, 511 Washington Ave. S.E., Minneapolis (telephone 625-9000, Monday through Friday, 7:45 a.m. to 4:30 p.m.)

For information about parking rates, call 626-PARK.

## **CEE/UC Student Board**

The Continuing Education and Extension/University College (CEE/UC) Student Board was formed to provide a forum for CEE/UC students, faculty, and administration to exchange ideas and information pertaining to Continuing Education and Extension/University College.

The board is composed of Extension students, the Dean of Continuing Education or designated representative, and two faculty or CEE/UC staff members.

All students are encouraged to communicate ideas,

suggestions, and concerns to the CEE/UC Student Board by calling 626-8501 to leave a voicemail message for referral to a board member.

### *Eligibility for Board Membership*

Students interested in election to the board must have earned a minimum of 12 University of Minnesota CEE credits in the last five years and be currently enrolled for a minimum of 3 CEE semester, quarter, or special term credits. Interested students should call 626-8501, to notify the board of their wish to join; those interested must then attend two regular board meetings within a 12-month period. At the third regular board meeting attended, the student is eligible to be appointed to the board by the CEE/UC Student Board Executive Committee.

Terms for student members of the CEE/UC Student Board shall be for one year beginning on May 15 and ending on the following May 15.

## **University Senate**

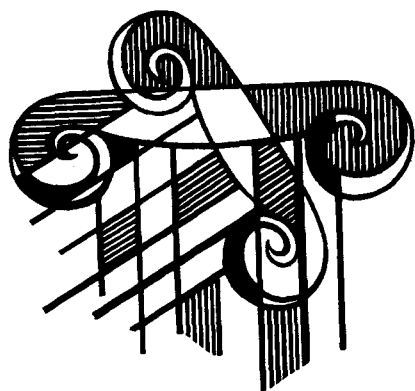
University of Minnesota students are eligible to serve in the University Senate. The University of Minnesota is one of the few universities in the country in which students may be elected to an academic governing body. As far as it is known, it is also one of only a few universities whose Extension students 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/University College.

### *Appointment to University Senate*

Student senators and alternates representing CEE/UC students are appointed to the University Senate from membership of the CEE/UC Student Board. Students interested not only in CEE/UC Student Board service, and in becoming a University Senator, should call 626-8501 for information on this process.





## Adult and part-time students, we're for you!

On the next 16 pages, read about:

- Student services
- Campus facilities and services
- Learning opportunities through CEE
- Special programs, options, activities

## You're invited ... to Education Fest

Continuing Education and Extension/University College will present its semi-annual "Education Fest" on Thursday, Sept. 7, 5 to 8 p.m., at Nolte Center on the east bank campus (repeated Tuesday, Feb. 27).

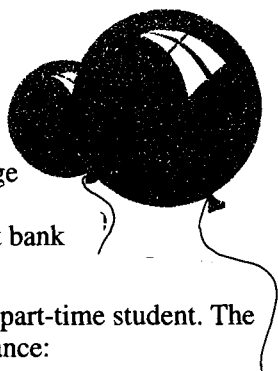
Education Fest is an open house for you, the adult and part-time student. The atmosphere is informal, but there's plenty to do. For instance:

- Learn about degrees and extension classes
- Pick up catalogs, course information
- Get information about financial aid
- Register for prizes
- Enjoy refreshments
- Discover new learning opportunities: self-paced independent study courses, research internships, management seminars, teacher education, and much more.
- Learn about student services
- Talk with a program adviser
- Take a campus tour
- Surf the internet at an e-mail demonstration

Registration offices in Wesbrook Hall are open until 8 p.m., and you may register for a class that evening.

Complimentary parking is provided on campus near Nolte Center on the evening of the Education Fest. From University Avenue, turn right on 17th Ave. S.E. (Church Street on campus). Go straight ahead about one block to the parking facility—watch for signs. Child care provided, too.

Call 626-1633 for a recorded message, directions.



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## **About the University:**

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### *Some public misperceptions and some CEE realities*

**Misperception:** *All the classes are so big.*

**Reality:** In a recent winter quarter, only 6 of over 500 Extension classes had more than 100 students in them. Most classes range from 10 to 30 students.

**Misperception:** *There is no place to park.*

**Reality:** On the east bank and west bank campuses, there are hundreds of parking spaces available within three blocks of the classroom buildings. Cost is about \$2 or less for surface lots; many ramps and garages are also open for evening parking (slightly higher rates), including the convenient ramp at Fourth Street S.E. and 17th Avenue S.E. Hundreds more low-cost parking spots are available at the Huron Blvd. Parking Complex just off Oak and Fourth Streets S.E., across from Mariucci Arena. (Prices and availability subject to change.)

**Misperception:** *You're just a number at the "U."*

**Reality:** You will have your own adviser to help you in selecting classes and planning your education—whether you just want to take a few courses or work toward a master's degree. These are full-time professional academic advisers who know just about everything there is to know about the University—and what they don't know, they'll find out and report to you. You can come in and visit (make an appointment for your convenience) or call anytime.

**Misperception:** *You can never get the classes you need.*

**Reality:** Hundreds of classes are scheduled each term. Often several sections of a required course are offered each quarter; choose the one that fits your schedule. Students who register by mail within the first day or two of registration get their first class choice most of the time. If you are in a degree program and there is a class you absolutely must have to continue progress toward your degree, you may register early (consult with an adviser on how to do this).

**Misperception:** *The entrance requirements changed a few years ago. It's a lot harder to get in now.*

**Reality:** Anyone can take University Extension classes and find out whether they're "college-able." If you're just registering for a class, you don't need to worry about high school record, class standing, or college entrance exams. (Some restrictions may apply; check with an adviser.)



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## Getting Started

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Getting started on an education through Continuing Education and Extension/University College isn't difficult. Here's some of the ways you can learn more.

### **Information meetings**

The CEE/UC Counseling Office conducts several regularly scheduled information groups for prospective students in August and September (and more later in the year).

You will learn about registration options, procedures, and general University requirements and have questions answered about getting started as an Extension student. Call CEE/UC Counseling at 625-2500 to reserve your space in the next meeting.

### **You are not alone**

Extension students juggle lots of responsibilities—college, job, family, community activities—and sometimes it seems there just isn't enough time for it all. It can help to talk with others who share your problems and your dreams. Check with an adviser at CEE/UC Counseling (625-2500) for referrals to campus organizations and services that fit your needs and interests. The CEE Student Board, for example, meets monthly and works on issues important to adult and part-time students.

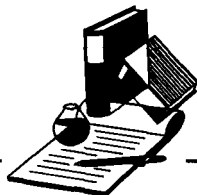
### **We're here when you're here. . . and then some**

The Extension Classes registration office in 101 Wesbrook Hall (east bank) is open until 8 p.m., Monday through Thursday, when classes are in session. You can register, cancel, pay fees, inquire about your registration status, and obtain information easily in one place.

**Saturdays, too**—Now the registration office is open one Saturday morning, 9 a.m. to 1 p.m., during in-person registration dates for each term; an adviser will be available, also. In addition, advisers are available for evening appointments; call 625-2500. And the east bank and west bank bookstores are open evenings early in the term and some Saturdays as well.

**Plus, we've added FAX registration (625-1511), student e-mail accounts, telephone textbook orders, credit card payment for tuition and fees, new degree programs with classes at local community colleges, new graduate degrees, and more. Watch for the Extension Classes newsletter, *Info*, for information about other opportunities during the year. Call 624-3300 to be added to the mailing list.**

# Study Skills Help



## **Tutoring program for second languages**

Evening classes in foreign languages are some of the most popular Extension courses offered. People take language classes for lots of reasons—to earn credit toward degree requirements, to prepare for travel outside the U.S., and to learn more about their own ancestry.

To help insure your mastery of a new language, Extension Classes has instituted a tutoring program in second languages.

Tutors will be available evenings to answer your questions, help you review and practice the language, explain usage, and provide the support you need to help make your learning experience a satisfying one. It's free, take advantage! Tutors are on duty in the following languages; call the appropriate department for hours and location.

**German 625-2080**

**French 624-4308**

**Spanish 625-5858**

## **Preparation for Graduate School**

Through the Compleat Scholar/Practical Scholar, several short-term classes or one-session workshops are offered to help you prepare for graduate school admission or study. Introductory workshops are offered this fall on deciding to attend graduate school and applying to and financing graduate school. Classes also are offered in assessing math skills for graduate admissions exams, preparing for the GRE (also GMAT, LSAT, and TOEFL), and other topics. See the Academic Skills section of the Practical Scholar course listings or call 624-8880.

## **Helpful Courses**

Many credit and noncredit courses (at regular tuition rates) are offered in study skills. In General College, *GC 1421 Writing Laboratory: Basic Writing*, includes tutorial help; follow-up course is *GC 1422 Writing Laboratory: Communicating in Society*. Other credit courses to aid in skills development include *LASk 1001 Becoming a Master Student*, *LASk 1501 Returning to Learning*, and *Rhet 1441 College Reading and Learning Skills*.

For help in mathematics, read about the Preparatory Mathematics Program offered by the General College. The program aids adult and re-entry students in correct placement in General College noncredit courses. Examples include *GC 0621 Elementary Algebra*, *GC 0623 Plane Geometry*, *GC 0625 Intermediate Algebra*, and others.

The Compleat Scholar and Practical Scholar programs offer noncredit courses in preparation for University mathematics classes. Courses include the *Math Skills Assessment Clinic*, *Basic Math: Concepts and Skills for Work or Future Coursework*, *Preparing for Graduate Statistics*, and *Elementary Algebra*. See the Academic Skills section of the Practical Scholar in the noncredit offerings.

For help in developing other academic skills and surviving the student experience, the Compleat and Practical Scholar programs also offer *Test-Taking Strategies*; *Surviving as a Student: Managing the Multiple Priorities of Your Life*; *Taking Effective Notes from Lecture and Text*; *Better Reading: Gaining Speed and Comprehension*; and *Grammar Refresher*.

## **Students of Color**

Students also may contact the appropriate learning and resources center about study aids available there: American Indian, 624-2555; Asian/Pacific, 624-2317; African American, 625-1363; Chicano/Latino, 625-6013

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# **Counseling and Advising: We Can Help**

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**If you're wondering . . .**

*What kinds of degrees and certificates can be completed through Extension Classes?*

*How do I go about planning a program?*

*What financial aid is available?*

*How do I choose a career or major that will be consistent with my goals and interests?*

*What additional education would I need for a new career or to get ahead in my present job?*

*How does my previous college work transfer to the University of Minnesota?*

. . . then contact the CEE/UC Counseling Office, 314 Nolte Center, at 625-2500 (e-mail address via internet is [CEEAdv@mail.cee.umn.edu](mailto:CEEAdv@mail.cee.umn.edu)).

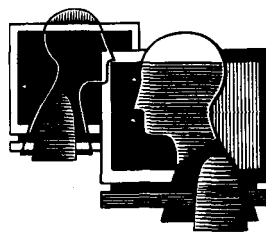
A professional staff of academic advisers and counselors at the counseling office are ready to assist you in formulating your educational and career goals.

Advisers are available for day or evening appointments and can be reached by phone or e-mail to answer questions, as well.

Registration information meetings (offered every term) give new students assistance in registering, general requirements, degree program admission, and other information to help you get started. Call 625-2500 to sign up.

The CEE/UC Counseling Office provides career counseling for current or prospective students. Career testing is available to help you learn more about your values, interests, and personal characteristics to help you achieve career and educational goals. Other career programs are offered throughout the year. A fee is charged for career counseling programs. Call 625-2500 for more information.





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## We're "U"ser friendly

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### **Bringing the "U" to you**

*The classes you need.* Whether it's for professional development, earning a degree, or just personal-interest learning, you'll find a variety of opportunities—both credit and noncredit. Classes are scheduled evenings and weekends when working people can take them. Everything you need from accounting to zoology. From one-morning workshops to graduate degrees. You can even take regular day school classes.

*The people you need.* The services you must have are in place, and Extension staff are working to make more of the University accessible to you. The University's experienced faculty and support staff work evenings and weekends for you. Advising, instructor's office hours, bookstores, computer labs, e-mail accounts, libraries, lounge areas, parking, registration—we're delivering the services it takes whether it's through later hours, by mail, or by telephone.

### **The Nolte Study**

The recently remodeled study on the ground floor of the Nolte Center for Continuing Education is the perfect place to study, stop and relax before class, meet friends and classmates, or pick up CEE/UC publications and registration materials.

The Nolte Study is open week nights, Monday through Thursday, until 7 p.m. An Extension staff member is available to help answer questions and make referrals.

Nolte Center is conveniently located on the East Bank campus near many classroom buildings. It is within easy walking distance to Extension offices in Wesbrook Hall, to Walter Library, and to University parking complexes on Fourth Street S.E. and on Washington Avenue.

### **Building accessibility for students with disabilities**

Wesbrook Hall became an accessible building in 1991. The ground-level entrance is on the right side of the main entrance on Pleasant Street S.E. Inside the building, go left to the elevator. Restrooms are to the right on that level. Several parking spaces in front of Wesbrook are reserved only for vehicles with handicapped permits.

Call Disability Services, 626-1333, for campus accessibility guides that show disabled parking places, building entrance levels, elevators, curb cuts, and accessible buildings.

For the hearing impaired, a TDD (625-4177) is available at the Coffman Information Center, 138 Coffman Union, evenings and weekends.

### **Campus escort service: 624-WALK**

The University police department conducts an evening campus security escort service on all campuses during regular academic terms. Security escorts will accompany Extension students between buildings and to parking lots or bus stops on or adjacent to campus. Use a campus phone to request an escort at 624-WALK.

# Bookstores: Where to Find What You Need



The University of Minnesota Bookstores carry everything you need to complete your studies at the U. Look to us for new and used textbooks, course packs, office and art supplies, computer hardware and software, and a comprehensive selection of general books, reference, and research materials. The UofM Bookstores are also your source for the latest University and Gopher fashions, insignia and gifts, as well as convenience items like film, calculators, greeting cards, and snacks. We're on campus to serve you with . . .

- friendly, knowledgeable staff
- official textbooks requirements for your courses
- extended hours at the start of each quarter
- Saturday hours, September through June, at the East Bank store
- academic pricing on name brand computer hardware and software for registered students
- conveniences like textbook mail-out service, stock transfers between stores
- special-order service
- VISA, MasterCard, Discover

Check the index for the page number where you will find more about bookstore policy and procedures.

**University of Minnesota Bookstores have four campus locations to serve you.**

**East Bank Store in Williamson Hall (625-6000)**

Textbooks and course packs for most departments in the College of Education, General College, the Institute of Technology, and the College of Liberal Arts including foreign language, composition, psychology, computer science, and social work.

**West Bank Store in Anderson Hall (625-3000)**

Textbooks and course packets for the Carlson School of Management and several College of Liberal Arts departments including history, political science, geography, sociology, and music.

**St. Paul Store in the St. Paul Student Center (624-9200)**

Textbooks and course packs for courses scheduled on the St. Paul campus including courses offered by the College of Biological Sciences, College of Natural Resources, College of Agricultural, Food, and Environmental Sciences, and the College of Human Ecology.

**Health Sciences Store in Moos Tower (625-8600).**

Textbooks and course packets for courses offering in the Medical School, School of Nursing, College of Pharmacy, Mortuary Science, School of Dentistry, as well as Public Health and Medicinal Chemistry.

**Computer Store in Williamson Hall (625-3854)**

A complete selection of name-brand computer hardware, software, and peripherals at special academic pricing for University students, staff, and faculty. Find the latest technology from Apple, IBM, ZEOS, Hewlett Packard, Compaq, Lexmark, Adobe, Microsoft, Lotus, Radius, Claris, WordPerfect, and others at the Computer Store.

# **Student Board; Rec Sports**

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## **Student Board: Get Involved**

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**Seeking more graduate-level Extension classes. Recognizing outstanding Extension students. Improving campus security. Reviewing student services. Presenting the Extension student's viewpoint to University and government officials. A forum for ideas and issues.**

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These are the kinds of concerns, problems, and opportunities the Continuing Education and Extension/University College Student Board considers every year—issues important to Extension students. Guests at student board meetings have included University central officers, regents, legislators, and department heads.

You are eligible to be considered for appointment to the student board if you are registered as an Extension student for at least 3 credits and have earned a minimum of 12 credits through CEE/UC during the last five years. Student board members also may be appointed to the University Senate, the primary academic governing body of the University.

All students are urged to communicate their ideas, suggestions, and concerns to the student board. If you would like to speak to a board member about a particular issue or are interested in attending a meeting or joining the board, call 626-8501 to leave a message.

## **Be a Sport!**

Enjoy recreational sports activities of all kinds to help you keep in shape and to unwind from work or study. As a registered Extension student, you are eligible to purchase the Department of Recreational Sports participation permit. (Some restrictions and enrollment requirements apply.)

You may participate in organized sports and intramurals and in open recreation (including the use of many new University recreational facilities such as racquetball and tennis courts, fitness equipment rooms, swimming pools, and gymnasiums).

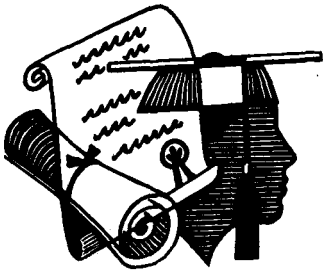
The individual, dual, and team intramural sports include soccer, tennis, basketball, bowling, ice hockey, swimming, broomball, softball, track, volleyball, flag football, and many more.

For men and women, sports clubs (over 50 of them) are organized for archery, badminton, ballroom dance, bowling, crew, soccer, rugby, fencing, cycling, martial arts, sailing . . . plus much more.

For further information about these programs and activities, telephone Rec Sports at 625-6800 or drop by 101 Cooke Hall on the Minneapolis campus (on the St. Paul campus, 104 St. Paul Gym). (Facilities may be subject to limited availability during busy periods.)



# Completing a Degree Through Extension Classes



You can complete a University of Minnesota bachelor's degree any one of several different majors through Extension registration. The courses you take and the graduation requirements you meet are determined by the college or program that grants the degree—not Extension Classes. This means your degree is the same as the one day school students earn (with the exception of the B.A.B. and B.I.N. degrees, especially designed for part-time and adult students and offered by CEE/UC only).

You must be admitted to a degree program to get a degree. Simply registering for classes and compiling credits does not mean you are in a degree program. Meet with an academic

adviser from CEE/UC Counseling before you begin taking classes so you can determine when to apply for admission into a degree program. Call CEE/UC Counseling at 625-2500 to make an appointment.

## Degrees and majors

Undergraduate degrees from the Carlson School of Management, College of Liberal Arts, University College, Institute of Technology, College of Agriculture, and College of Human Ecology can be completed—or almost completed with some substitution, previous course work, or day school registration—in the following areas. (*This list is subject to change annually.*)

**Business—Applied (B.A.B.)**

**Business—General Management (B.S.B.)**

**Business—Accounting (B.S.B.)**

**Anthropology**

**American Studies**

**Art History**

**Studio Arts (B.A.)**

**Biology (B.A.)**

**Civil Engineering**

**Child Psychology**

**Computer Science**

**Cultural Studies/Comparative Literature**

**Economics**

**Electrical Engineering**

**English**

**History**

**Individualized Study Program (B.I.S.)**

**Individually Designed Interdepartmental**

**Major**

**Information Networking (B.I.N.)**

**Inter-College Program**

**Mathematics**

**Mechanical Engineering**

**Philosophy**

**Political Science**

**Program for Individualized Learning**

**Psychology**

**Sociology (B.A. or B.S.)**

**Speech-Communication**

Completing a degree will require careful planning and scheduling of classes, so see an adviser early and often. See the degrees section near the end of this bulletin for more information, also.

# Innovations and Excellence: All our best to you



Take advantage of new small-group classes that stress interaction with University faculty, interaction with your peers, and academic challenge unequalled anywhere in the country. See the departmental listings in the credit section of this bulletin for complete descriptions.

## **Interdepartmental Studies: Learning isn't what it used to be. It's better.**

For complete descriptions of these Interdepartmental Studies courses, see the credit courses section of the bulletin.

**ID 5525-5526 *Garbage, Government, and the Globe.*** Garbage and waste—and how to handle it—as it affects the economy, environment, politics, and health. Faculty from several disciplines.

**ID 5615-5616-5617 *Ways of Knowing.*** Faculty from six very different areas—as diverse as history and dance—review in 5-week courses the way they study, experiment, and draw conclusions about a body of knowledge. There are startling similarities and differences.

**ID 3925 *Life/Career Planning.*** Faculty from College of Liberal Arts Career Development will help students explore and reassess their skills, values, interests. Each student will develop an individualized career plan.

**ID 3336 *Crossing the Borders of Literature and Science.*** Explore questions about the complex relations between these two areas of knowledge and about attempts to bridge the gap.

## **Hidden Treasures—an academic assortment**

**Pol 1001/Econ 1102 *American Government/Principles of Macro-Economics.*** A combined offering of two introductory courses that reflects their real-life integration.

**CSCL 3172 *Music as a Discourse.*** Music and its connections to other arts, humanities, social sciences.

**EEB 3006 *Visions of Nature: The Natural World and Political Thought***

**Engl 5910 *Old Age in Modern Film.*** Screenings and thematic study of aging as the central focus in visual and literary texts.

**GC 1851 *Multicultural Relations.*** Intercultural and interracial relations, interaction; cultural pluralism in the U.S.

**GCB 3008 *The Biology of Cancer.*** Etiology, cellular processes involved in neoplasia; history of cancer research.

**OMS 5850 *International Operations Management.*** Managing international production, assembly, support, and service operations.

**WoSt 3500 *Working Class and Poor Women's Lives.*** Public policy and daily life; jobs, housing, health care, education, poverty; policy reform.

## **Honors Courses in Extension Classes**

Special Honors Opportunities are offered by the College of Liberal Arts to bring together the very best Extension students and some of the University's outstanding faculty. Admission is by special permission.

**HSem 3050 *Journeying/Journaling: Our Lives in Image and Text.*** The interaction of content, language, and visual form. Joyce Lyon, art professor, and Riki Kolbl Nelson, instructor.

**HSem 3060 *Political Assassinations: Ancient and Modern.*** Historical context of significant assassinations. Gerald M. Erickson, Classical and Near Eastern Studies.



## Independent Study

### Credit courses by correspondence

Independent Study offers hundreds of full-credit courses you can take from home or wherever you are. It's real college work, but with flexibility built in. You can register any day of the year. You study at home, mail in course work, and get evaluations back from your instructor by mail. For some courses, lesson exchange by e-mail is possible.

You can enroll in Independent Study courses by phone, fax, mail, or in person. Credit cards are accepted for tuition and other expenses. You can order

books and supplies by mail, study on your own schedule, and you never have to set foot on campus. Course credits go on a regular University transcript and can be used to fulfill University distribution requirements and CEE/UC certificates. Graduate credit is available for selected Group Independent Study courses.

All courses come with a printed study guide that coordinates your textbook reading, gives study notes, and explains assignments. In addition, many courses include video cassettes, audiotapes, or computer software.

### Engineering degree coming in Fall 1996

The Institute of Technology will offer a Bachelor of Electrical Engineering (known as the BEEDE degree) through a program of distance education administered by Independent Study. This degree program is designed for corporate employees and other working adults. The first group of students will be taking courses fall 1996. Those interested should plan to complete the prerequisite courses by spring 1996. For a BEEDE information brochure, call Independent Study at (612) 624-1691.

### Group Independent Study—a new learning option

These special courses combine the flexibility of correspondence study with monthly class meetings for first-hand contact with the professor and your fellow students. Group Independent Study (GIS) courses begin on a specific date, last about six months, and include four to six class meetings for lectures, discussions, and group activities. Interactive television links students in classrooms at several campuses of the University. Students do most of their work at home and still have opportunities for person-to-person interaction. Please see the Independent Study course bulletin for details about this year's courses:

#### Fall-winter

**Biol 5003 Genetics** (meets at Twin Cities, Crookston, and Rochester)

**Mgmt 3004 Business Policy: Strategy Formulation and Implementation** (meets at Twin Cities and Crookston)

#### Winter-spring

or 1-800-234-6564; FAX (612) 626-7900; e-mail at [indstudy@maroon.tc.umn.edu](mailto:indstudy@maroon.tc.umn.edu)

Or write to Department of Independent Study, University of Minnesota, 45 Wesbrook Hall, 77 Pleasant Street S.E., Minneapolis, MN 55455

Or you may look up our course bulletin online at these URLs: <http://www.cee.umn.edu/dis> or [gopher://mail.cee.umn.edu:70/11/dis](mailto:mail.cee.umn.edu:70/11/dis)

**AgEc 5640 Financing State and Local Government** (meets at Twin Cities, Crookston, Morris)

**Engl 3008 Techniques of Literary Study** (meets at Twin Cities and Rochester)

#### Spring-summer

**Biol 5004 Cell Biology** (meets at Twin Cities, Crookston, and Rochester)

**Engl 3111 Survey of English Literature** (meets at Twin Cities and Rochester)

Ask for an Independent Study course bulletin: (612) 624-0000

# The Compleat and Practical Scholar, Management Advancement Program



## Noncredit learning from the Compleat & Practical Scholar

The Compleat Scholar and Practical Scholar programs offer a comprehensive curriculum of courses that provide University learning without credit. Compleat Scholar courses focus on liberal arts areas—art, literature, social sciences, natural and physical science, and writing. Practical Scholar courses focus on problem-solving and skill-building areas—human development, practical insights, and academic skills.

These courses typically are scheduled for two to seven meetings and offer stimulating and challenging learning in lecture and discussion format without grades or exams. Some courses include field trips and guest speakers. All are led by experienced instructors, including University faculty and staff and community experts.

A sampling of titles for this year appears below. See the **Noncredit Course Offerings** section of this bulletin for complete listings. Or call 624-8880.

*Regional Artists and Writers Depict the*

### *Environment*

*Mimbres Pottery of the American Southwest*  
*Haiku and Papermaking Workshop*  
*Cathedrals and Courts: Music of the Middle Ages*  
*Black Roots: African-American Photography*  
*Moral Documents: Dorothea Lange's American Photographs*  
*Exploring Ethnic History Through Oral History and Autobiography*  
*Plants and People: Ethnobotany of the Western Great Lakes*  
*Ancient Mysteries of the Bible*  
*Morality and Foreign Policy*  
*A Poet's Armchair Tour: Wales, Ireland, and*

### *Scotland*

*Drifting Continents/Expanding Oceans: The Dynamic Earth*  
*Laser—The Light Fantastic!*  
*Science or Pseudoscience? Examining the Difference*  
*Asian Medicine: Alternative Ways of Knowing*  
*Discovery Writing: Creating a Future Creativity and the Myers-Briggs*  
*Experiencing Movement Therapy*  
*Designing Gardens for Year-Round Beauty*  
*Splendor Under Glass: Great Conservatories*  
*The Beginning and The End of The Universe*

## Management Advancement Program (MAP)

If you are a professional who remains committed to your own improvement, an executive or manager concerned with developing the talents of those you supervise, or a decision maker looking to gain an edge for your organization, then MAP is for you. The Management Advancement Program provides up-to-the-minute seminar education at highly competitive rates and taught by top-notch leaders with a wealth of private-sector experience.

The seminars and workshops of the Management Advancement Program meet at the University's comfortable Earle Brown Conference Center in convenient one- to three-day time blocks. Before and after each program, the Management Advancement Program offers each registrant a unique opportunity to make sure his/her learning objectives are met and questions answered. MAP seminar learning, where the University serves business professionals. Call 626-8713 for registration materials. A sampling of workshops offered last year includes:

*Handling Difficult People*  
*Coaching Employees to Improve Performance*  
*Making Teams Work Better*  
*Designing Questionnaires and Surveys*  
*Using 360-Degree Assessment To Improve Management Practice*  
*Pulling Together: Communications for Men and Women in the Workplace*

*Finance and Accounting for Managers*  
*Multi-Cultural Marketing*  
*Quality Customer Service*  
*Taking Risks: Breaking Through the Barriers to Effective Change*  
*The Prevention and Resolution of Conflict*  
*Strategic Selling Skills*



# Split Rock Arts Program; M.Ed. degrees for teachers, youth workers

## Split Rock brings out the artist in you



**SPLIT ROCK**  
arts program  
summer workshops  
in Minnesota

The Split Rock Arts Program is a summer series of intensive, residential week-long workshops in the visual and literary arts and in the nature and applications of creativity. Workshops are led by outstanding University of Minnesota artists and nationally renowned guest artists who bring their unique gifts and perspectives to the teaching process.

Home base for Split Rock is the University's Duluth campus. Split Rock participants are encouraged to draw upon the spectacular forest and shoreline environment of northeastern Minnesota as they engage in the creative process. In addition, a few retreat-style workshops take place at the Cloquet Forestry Center, and the Institute for Weavers classes are held on the St. Paul campus.

Participants may choose from over 40 workshops held over a five-week season. Some include trips along the North Shore, some offer methods and approaches from other cultures, some combine artmaking with the personal and social concerns of our near and far worlds, and some link creativity to our emotional and spiritual well-being. Split Rock workshops include:

*Writing Essays in the Forest*  
*Drawing from Experience*  
*Enhancing Creative Potential*  
*Contemporary Quilting: Pieced, Painted, Patterned*  
*Autobiography of the Soul*  
*Writing Children's Picture Books*  
*Creating and Manipulating Fabric Surfaces*  
*Writing Humor*

*New Dimensions in Beadwork*  
*The Self as the Source of the Story*  
*Contemporary Basketry*  
*Writing the Short Story*  
*Watercolor*  
*Poetry and Belief: A Retreat at the Cloquet Forestry Center*

For complete information and your copy of the latest Split Rock Arts Program catalog, call 624-6800 or write Split Rock Arts Program, 306 Wesbrook Hall, 77 Pleasant Street S.E., University of Minnesota, Minneapolis, MN 55455.

## Unique Master of Education degrees—for teacher leaders and youth workers



Two unique credentials—one for teachers making a difference in their schools and one for people making a difference in the lives of young people—are offered cooperatively by CEE/UC and the College of Education and Human Development.

The Teacher Leadership master's degree is for K-12 teachers who are responding to educational changes and challenges as leaders in their districts, working on issues like site-based decision making and staff development. You'll go through classes as a group, building support and networking systems. Classes meet off campus. The program follows a unique combination of course work from Curriculum and Instruction and from Educational Policy and Administration. Application for fall admission is April 1.

The Youth Development Leadership program connects youth workers (volunteer or paid) with community agencies, professionals, and faculty leaders in a new program that emphasizes experiential learning, positive youth development, portfolio development, and field experience. This three-year program is designed for full-time working adults who work for and on behalf of youth. Core courses begin in the fall, but students can be admitted any quarter.

Staff in CEE are committed to providing services that will facilitate your participation in these graduate degree programs and help assure success. These include:

- Course scheduling that permits completion of the master's degree in three years.
- Convenient late afternoon and evening classes (with possible weekend scheduling, too).
- The option of taking required courses at remote sites.
- Easy mail registration and centralized support services through a separate CEE office designated for these two programs.

For information about degree requirements, call 626-7196.

# Research Explorations, Science Centrum for K-12 education

## REX puts you in "U" research

Discover a new type of educational experience—one that merges a little work, possibly a little travel, and a lot of learning. That's what Research Explorations (REX) provides. This Extension Classes program matches faculty with people who want to join a research team and work on important projects—in the laboratory, in the field, and in the community. Although REX is a noncredit program, it is usually possible to arrange for directed study to earn credit as part of your REX experience. The principal requirements are curiosity, adaptability, and a willingness to support academic and scientific inquiry. Call 624-5092 for a complete listing of over 50 REX opportunities, such as the following.

*Neurobiology of Pain and Opiates*  
*Native American Myth Busting*  
*Agricultural Chemicals and Groundwater Contamination*  
*Women in Science, Engineering, and Mathematics*  
*Origins of an Iron Age City in Bavaria*  
*Relationships in Adoptive Families*  
*Soil Fertility and Crop Productivity*

*Origin of English Words*  
*Quality of Life After Heart Surgery*  
*Paper Recycling Technology*  
*Attention Deficit Disorder: Determining Test Norms*  
*Food Issue Decision Cases*  
*The German Language in Minnesota*  
*Behavior of High-Strength Concrete*  
...and many more

## Science CentrUM

Connecting college-level learning and research with K-12 science instruction—that's the goal for the Science Centrum, a new clearinghouse and resource for science educators, at all levels, that provides interaction, discussion, networking, and course work. Here's some of the opportunities Science CentrUM is offering . . .

- *Electrophoresis Workshop—A Hands-On Workshop for Biology Teachers.* A one-day noncredit workshop learning about and performing gel electrophoresis with DNA.
- *Squirrels, Pigeons, and Other Urban Animals: Integrated Science for K-6 Teachers.* A two-credit workshop (grad credit available). Multidisciplinary activities that help introduce science content in your classroom.
- *Science Teaching and the Internet.* Two-day workshop. Take advantage of the wealth of material available on the 'net and World Wide Web. No prior experience assumed. Grad credit available.

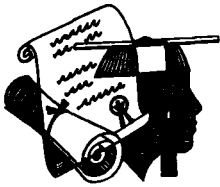
## Science CentrUM can refer you to existing resources, too . . .

- *Research Explorations (REX) for Teachers.* Work firsthand with University researchers on research projects and gain practical experience, earn graduate credit, and develop curriculum. Flexible scheduling. Some stipends available. Over 50 projects available including paper recycling technology, mushroom study, soil fertility, forest biodiversity, sediment in streams, and many more.
- *University of Minnesota Programs in Science for Students and Educators.* A resource directory compiled by the College of Education and Human Development that lists contact persons and program descriptions.
- *Compleat Scholar.* Many natural science and environmental noncredit courses offered each term in short-term evening and weekend classes. Topics like: Minnesota wildflowers, ferns, shrubs; native forests of the Twin Cities; natural history of owls; extinction of the dinosaurs; conservation and animal management at the Minnesota Zoo.
- *Credit evening, weekend, and daytime classes.* Register through Extension Classes for regularly scheduled credit classes, many offered for graduate credit, in science and the environment. You'll find courses in disciplines you may not have thought of, such as history of science, health, anthropology, veterinary medicine, food science, and cultural studies/comparative literature. In addition, many credit courses in the sciences are specifically directed at teachers. These include courses in the College of Education and Human Development as well as courses from other colleges such as . . .

*Introductory Environmental Earth Science for Teachers*  
*Garbage, Government, and the Globe for Teachers*  
*Teaching Biology Seminar*

*Using Insects in the Classroom*  
*Paper in Today's World*  
*Historical Geology for Teachers*  
*Physics for High School Teachers*

Call the Science CentrUM at 624-5092 for more information (e-mail is [scicentrum@mail.cee.umn.edu](mailto:scicentrum@mail.cee.umn.edu))



## New Degree Programs

Continuing Education and Extension/University College is developing new degrees to serve better the adult and part-time learners in Minnesota. Emphases in these programs include new "applied degrees," offered in cooperation with community colleges and other institutions through the Twin Cities Higher Education Partnership, as well as expanded opportunities through post-graduate learning. See descriptions in the Degrees and Certificates section of this bulletin and call the counseling department at 625-2500 to talk with an adviser about the programs listed below (referrals to sponsoring departments are sometimes necessary).

**Bachelor of Applied Business (B.A.B.)**—Offered in cooperation with Inver Hills Community College, this degree is a practitioner-oriented program especially for people already in the workplace who want to expand their career skills and opportunities. Required classes meet evenings at Inver Hills.

**Bachelor of Information Networking (B.I.N.)**—Offered in cooperation with North Hennepin Community College, this degree combines practical experience and technical learning. Students take core courses at North Hennepin that enable them to learn and apply information processing, management principles, computer applications in networking, and working with data over various networks and between platforms.

**Master of Social Work—Weekend Option (M.S.W.)**—Course requirements can be completed in two years through weekend attendance. Designed for people working in the helping professions; minimum of one year of experience required for admission.

**Master of Liberal Studies (M.L.S.)**—Timely and timeless learning in a new self-directed graduate degree program designed for adults and part-time learners. Seminar courses provide a broad-based interdisciplinary approach to learning that students also apply to in-depth study of topics significant to them.

**In CEE/UC, you'll also find undergraduate degrees available in more than 25 majors or options as well as master's degrees in English (literature or writing), business taxation, and education (teacher leadership). See the Degrees and Certificates section of this bulletin.**

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# **Continuing Education and Extension/ University College Scholarships for Adult, Part-Time Students**

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**F**or CEE/UC students enrolled in undergraduate credit classes leading to bachelor degrees and certificates, several scholarship opportunities exist. All CEE/UC scholarship awards are based upon five primary criteria: high academic ability; financial need; community service; a written personal statement of academic and career goals; and a delay or interruption in education.

**Nolte Scholarships:** Named in honor of Julius Nolte, Dean of CEE from 1943-63, Nolte Scholarships are supported by an endowment created by gifts from individual and corporate donors. These scholarships are open to all CEE/UC students enrolled in credit instructions in all fields.

**Minority Access and Retention Scholarships:** Minority Access and Retention Scholarships are funded primarily by corporate gifts (American Express Financial Services, Honeywell, ADC Telecommunications). These scholarships assist and encourage adult students of color to enroll in programs of the University of Minnesota.

**Woman's Christian Association/Kate Dunwoody Scholarships:** The WCA/Kate Dunwoody Funds supports scholarships for women students in all academic areas through generous annual gifts.

**Schott Science and Technology Scholarships:** Funded by annual gifts from the Schott Foundation, these scholarships assist students enrolled in degree and certificate programs in the fields of science and technology.

**Women's Scholarships:** CEE/UC's newest scholarship, the Women's Fund for Scholarships endowment, established by gifts from foundations and individual donors, focuses specifically upon adult, single women with dependent children.

**Gilford W. and Ester F. Remington Scholarships:** These scholarships are designated of students enrolled in Duluth and Twin Cities CEE/UC classes in art, history, education, and audio-visual.

**Edith Mucke/Louise Roff Scholarships:** Mucke/Roff Scholarships are primarily for students enrolled in Continuing Education for Women credit and noncredit classes.

The CEE/UC Department of Counseling awards all CEE/UC scholarships. Advisers work closely with applicants to screen them for eligibility for other federal, state, and University of Minnesota grants and scholarships or employer reimbursement programs. The counseling department will assess students' academic and financial needs. A CEE/UC Scholarship Selection Committee reviews all applications and selects recipients.

The CEE/UC Development Advisory Committee, composed of community volunteers who support the mission of CEE/UC, is instrumental in soliciting the various monies which support these scholarships.

Please see the financial aid section of this bulletin for more information about these scholarships. For information about development efforts for adult and part-time students in CEE/UC, you may contact The Nolte Fund/U of M Foundation, CEE/UC Development Office, 305 Westbrook Hall, 77 Pleasant Street S.E., Minneapolis, MN 55455.



# Degrees & Certificates

For further information about degrees and certificates, telephone CEE/UC Counseling at 625-2500 or inquire via internet: CEEAdv@mail.cee.umn.edu

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## Degrees

### Note: Important Admissions Information

All students admitted to a University of Minnesota baccalaureate degree program must meet the preparation standards listed below (see exception).

1. Four years of English (with emphasis on writing, reading, speaking skills, and literary understanding and appreciation)
2. Three years of mathematics (one year each of elementary and intermediate algebra and geometry)
3. Three years of science (including one year each of biological and physical sciences)
4. Two years (or three college quarters) of a single second language
5. Two years of social studies (including U.S. history)

Also recommended, but not required, are courses in computer skills and the visual and performing arts.

These required preparatory courses can be completed in high school or in Extension Classes or Independent Study courses. If you did not complete these requirements in high school, an adviser in the CEE/UC Counseling Office (625-2500) can help you select the equivalent course at the University which will satisfy the requirement.

**Exception:** Applicants who graduated from high school before 1987, or those with a completed baccalaureate degree, are exempt from these requirements but are strongly encouraged to complete them to enhance their chances for academic success.

If you have questions about gaining admission to a degree program or the preparation requirements, please contact an adviser in CEE/UC Counseling at 625-2500.

Degree and certificate program requirements may change and occasionally programs are discontinued. The University will make every reasonable effort to assist admitted students in completing a program.

Several college degrees, in more than 25 major areas, may be earned completely through Extension attendance. In addition to undergraduate degrees, some master's degrees also are available through evening and weekend classes.

Students seeking a college degree through Extension should consult, early in their planning, with an adviser at the CEE/UC Counseling Office (625-2500). Advisers can explain degree requirements, help in course selection, review transcripts of previous college work, and refer students to college offices and major advisers when appropriate.

Simply taking classes and earning credit does not mean a student has been admitted to a degree program. *Students must apply to the college or program which grants the degree.* An adviser can explain when and how to apply for admission to a college and help in course selection.

Colleges and degrees (undergraduate and graduate) are described in detail on the following pages.

## Academic Progress

Academic progress for students enrolled in degree-granting programs will be monitored by their respective college offices. In addition, students receiving financial aid through the Office of Scholarships and Financial Aid (OSFA) will be held to a similar, but possibly different, standard. Financial aid recipients must meet **both** the college and the OSFA standard. For additional information, please refer to the Academic Progress section on page 35.

Students with excessive credits and problematic grade-point averages may have a hold placed on their record restricting their registration in Extension Classes.

# Undergraduate degrees

The University of Minnesota—Twin Cities campus colleges are moving toward a common, standardized list of liberal education requirements (the “general” courses required in any degree) that will apply to most degree programs. These liberal education requirements will make degree planning easier. For example, with one standard set of “general” requirements, students who are undecided about a major can begin working on these requirements and be assured that these courses will apply toward their degree.

The new liberal education requirements are available now to first-year students (38 or fewer credits) who are officially admitted into a degree program. Beginning in fall 1996, newly admitted first-year students and transfer students will be able to take advantage of these requirements.

If you are officially admitted to a degree program, check with your college adviser as to which liberal education requirements you should pursue. If you are an Extension student not yet admitted to a degree program, the requirements you should pursue will depend on when you will be admitted and how many credits you have earned. Check with an adviser in CEE/UC Counseling for assistance; telephone 625-2500.

A detailed explanation of the liberal education requirements is included below.

## The New Liberal Education Requirement

The University of Minnesota—Twin Cities Liberal Education Requirements apply to students entering a degree program at the Twin Cities campus for the first time fall quarter 1994 with fewer than 39 credits. (Students entering a degree program before fall 1996 or with 39 or more credits are responsible for earlier general education requirements in the colleges or programs.) An academic adviser can help students with requirements and course options.

Note: Students pursuing the Bachelor of Information Networking and Bachelor of Applied Studies degrees should consult their adviser about their liberal education requirements.

### LIBERAL EDUCATION REQUIREMENTS

*Overview*—A liberal education introduces students to the modes of inquiry and subject matter of the major branches of knowledge, including the factual

information and theoretical or artistic constructs that form their foundation; the “ways of knowing”—the kinds of questions asked and how insight, knowledge, and data are acquired and used; the changes over time of their central ideas or expressive forms; and the interrelationships among them and with human society in general. To these ends, study by all undergraduate students on the Twin Cities campus is guided by a common framework.

The Liberal Education requirement has two parts, the *Diversified Core* and the *Designated Themes*.

### THE DIVERSIFIED CORE CURRICULUM

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

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

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

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

### THE DESIGNATED THEMES OF LIBERAL EDUCATION

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

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

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

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

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

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

For a detailed list of courses that meet the Diversified Core and Designated Themes curriculum, contact the CEE/UC Counseling Department, telephone 625-2500.

## Continuing Education and Extension/University College

### Bachelor of Information Networking (B.I.N.)

The Bachelor of Information Networking is offered by Continuing Education and Extension/University College at the University of Minnesota in conjunction with North Hennepin Community College (NHCC). The University offers the upper-division courses and awards the degree. North Hennepin offers lower division and prerequisite courses and is the site for most of the courses in the program.

The B.I.N. degree is an interdisciplinary blend of computer science, management and information systems, liberal arts, science and engineering, and practical hands-on experience. Students in the program will gain a thorough understanding of both the design and management of voice, video, and data transmissions over various networks and between different platforms.

B.I.N. graduates are prepared to assume a wide range of positions in the industry that Vice President Al Gore calls “the most important and lucrative marketplace of the 21st century.” Career opportunities exist in software development, network design and administration, interactive television, fiber optic information services, and other areas. If you are interested in the B.I.N. degree call the CEE Counseling Department at (612) 625-2500 to speak with a B.I.N. adviser or inquire via internet: UBIN@mail.cee.umn.edu.

### Admission to the program

Each year up to 20 students will be admitted into the B.I.N. program. The application process is based on the following criteria:

- completion of specific physics, mathematics, and computer science courses;
- a minimum of 70 quarter credits transferable to the program plus a minimum G.P.A. of 2.60;
- priority is given to applicants with 90 transferable quarter credits, 3.00 G.P.A., and residents of Minnesota and reciprocity states.

### B.I.N. Curriculum

The curriculum of the B.I.N. consists of 182 credits. Lower division and prerequisite course work can be completed at NHCC, the University of Minnesota, or upon evaluation, other colleges and universities. Courses listed below with 3-digit numbers are NHCC lower division courses (equivalent courses from other institutions may be substituted); 4-digit courses are University of Minnesota courses.

#### First- and Second-Year Courses

|              |  |
|--------------|--|
| CSci 102*    | Computer Programming in C (5 credits)      |
| CSci 250*    | Assembly Language Programming (4 credits)  |
| CSci 260*    | Algorithms and Data Structures (5 credits) |
| Econ 106     | Macro-Economics (4 credits)                |
| Econ 107     | Micro-Economics (4 credits)                |
| Engl 194     | Technical Writing (3 credits)              |
| Engr 241/243 | Circuit Analysis I: DC (6 credits)         |
| Engr 242/244 | Circuit Analysis II: AC (6 credits)        |
| English 111  | Freshman English I (5 credits)             |
| English 112  | Freshman English II (5 credits)            |
| Math 121*    | Calculus I (5 credits)                     |
| Math 122*    | Calculus II (5 credits)                    |
| CSci 240*    | Discrete Structures (5 credits)            |
| Math 232*    | Linear Algebra (5 credits)                 |
| Phys 150*    | General Physics (4 credits)                |

## General Information

|               |   |
|---------------|---|
| Phys 151/154* | General Physics & Lab (6 credits)       |
| Phys 152/155* | General Physics & Lab (6 credits)       |
| Phys 153/156* | General Physics & Lab (6 credits)       |
| Speech 100    | Interpersonal Communication (3 credits) |
| Speech 101    | Fundamentals of Speech (4 credits)      |

### Third-Year Courses

|           |   |
|-----------|---|
| Acct 224  | Principles of Accounting (4 credits)                                    |
| Bus 220   | Introduction to Management (4 credits)                                  |
| CSci 5102 | Software Systems II (4 credits)   |
| CSci 5113 | Object Programming in C++ (4 credits)                                   |
| CSci 5201 | Computer Architecture (4 credits)                                       |
| CSci 5211 | Data Communication and Computer Networks (4 credits)                    |
| CSci 5212 | Network Programming Lab (2 credits)                                     |
| IDS 5102  | Introduction to Information Systems Analysis (4 credits)                |
| IEOR 5703 | Project Management (4 credits)  |
| Psy 203   | Psychology (5 credits)  |
| Math 201  | Probability and Statistics for Engineering and the Sciences (4 credits) |
| Elective  | Social Science (4 credits)  |

### Fourth-Year Courses

|            |   |
|------------|---|
| CSci 5180  | Software Engineering (4 credits)  |
| CSci 5221  | Advanced Computer Networking (4 credits)  |
| CSci 5222  | Network Operation and Administration Lab (4 credits)                            |
| Elective   | Business Finance, Information and Decision Sciences, or Management (4 credits)  |
| Elective   | Computer Science, Electrical Engineering, or Management (4 credits)             |
| Electives  | Computer Science, Electrical Engineering, Management, or Internship (8 credits) |
| Elective   | Humanities (4 credits)  |
| Elective   | Liberal Education (4 credits)   |
| Elective   | Practicum (2 credits)   |
| New Course | Legal and Political Issues of Networking (4 credits)                            |

\* Prerequisites for admission

## Bachelor of Applied Business (B.A.B.)

The Bachelor of Applied Business is offered by Continuing Education and Extension/University College in cooperation with Inver Hills Community College (IHCC). The University offers the upper division courses and awards the degree. Inver Hills offers lower division course work, including a two-year degree (Associate of Science in Applied Business) which meets all prerequisites, and is the site for the University courses. Prerequisite courses may also be taken in Extension Classes, Independent Study (correspondence) courses, and at other community colleges.

The B.A.B. is a new practitioner-oriented degree intended for adult and part-time students. Courses address real-world business issues and relate work-place skills to student experience. A unique professional skills core of courses emphasizes applied skills. Graduates of the B.A.B. program will be prepared with a portfolio of skills and competencies that will be valuable in their current jobs and help them advance in their careers.

## Admission to the Program

Applications can be submitted for any term; each year up to 40 students may be admitted. Students who have completed all prerequisites are given priority in consideration. Students may choose, with adviser approval, to begin course work before admission. The application process is competitive and based on the following criteria:

- completion of required prerequisite courses such as business, mathematics, statistics, economics, and certain other general requirements in the arts, science, and social sciences;
- a minimum of 70 quarter credits transferrable to the program and a minimum G.P.A. of 2.20;
- consideration will be given to other criteria, including grade-point average and work experience or significant accumulated life experience.
- priority is given to applicants with 90 transferable quarter credits and to residents of Minnesota or reciprocity states.

### B.A.B. Curriculum (180 credits)

The courses listed below are the curriculum for the B.A.B. degree. Lower division and prerequisite course work can be completed at IHCC, the University of Minnesota, and upon evaluation, other colleges and universities.

**Lower Division Courses (70–94 credits)***Essential Business Core—Required Coursework*

(These are general titles or topics; equivalent courses may be substituted upon approval.)

Introduction to Business  
Microeconomics  
Legal Aspects of Business  
Managerial Communications  
Principles of Accounting I  
Principles of Management  
Math for Decision Making  
Principles of Marketing  
Human Relations  
Introduction to Computer Science  
Statistics for Decision Making

*Additional Preparation Coursework*

(Completion before admission recommended.)

English Composition  
Global Economic Geography  
Principles of Accounting II  
Fine Arts/Humanities  
Speech  
Psychology/Sociology  
Business Operations/Small Business Management  
Science  
Upper Division Courses—University of Minnesota  
(86 credits)

*Professional Skills Core (40 credits)*

Historical Perspectives and Contemporary  
Business Challenges (4 cr)  
Problem Solving in Complex Organizations (4 cr)  
Small Group Behavior and Teamwork (4 cr)  
Managing Organizational Relationships (4 cr)  
Communicating for Results (4 cr)  
Accessing and Using Information Effectively (4  
cr)  
Quantitative Skills for Decision Making (4 cr)  
Leadership in a Global and Diverse Workplace (4  
cr)  
Planning and Implementation at the Business  
Unit Level (4 cr)  
Project Management in Practice (4 cr)

*Elective Courses*

26 credits with at least 16 at the upper division level

**College of Liberal Arts****Bachelor of Arts (B.A.)**

The Bachelor of Arts degree from the College of Liberal Arts can be earned in several major fields through Continuing Education and Extension/University College. Some requirements of the degree program may be met with credits transferred from other accredited colleges and universities. Students wishing to earn the B.A. degree through Continuing Education and Extension/University College should talk with an adviser from CEE Counseling (625-2500) as soon as the decision has been reached.

Candidates for the B.A. degree must complete 180 credits acceptable to CLA (a minimum of 45 credits graded A, B, or C in University of Minnesota CLA courses, 72 of them in 3000- and 5000-level courses). A maximum of 12 credits of D may be applied toward the 180-credit requirement. Students must also satisfy the English composition and second-language requirements. Finally, B.A. candidates must complete a major sequence in the field selected and complete at least 28 credits in 3000- or 5000-level courses from units outside their major department (interdepartmental majors are exempt from this requirement).

Most students try to meet the writing requirement, second language, and many of their liberal education requirements in their first 90 credits, leaving the last half of their programs free for work in their major field and electives. Although it is usually desirable to meet these requirements early, it is not necessary to complete them before applying for admission to a major program. Sophomores (39 or more credits) in good standing may apply for admission to majors.

*The following majors currently can be completed in Extension Classes:*

American Studies  
Art  
Art History  
Child Psychology  
Computer Science  
Comparative Literature/Cultural Studies  
Economics  
English  
History  
Individualized Study Degree Program (B.I.S.)  
Individually Designed Interdepartmental Major (IDIM)  
Philosophy  
Political Science  
Psychology  
Speech-Communication

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## General Information

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Majors in other departments—Anthropology, Biology, Mathematics, and Sociology—can be nearly completed through Extension Classes. A few courses must be taken in day classes (the departments concerned sometimes permit substitution).

Students also may choose to complete a minor. A minor is an approved concentration of 15 to 25 3000- and 5000-level credits in a single department or program. Approved minors are listed in the departmental entries in the CLA bulletin and are summarized on page 10 of the CLA bulletin. For additional information, call CEE/UC Counseling, 625-2500.

The minors that can be completed in Extension Classes are:

Art

Child Psychology

Computer Science

Dutch

Economics

English

History

Mathematics

Philosophy

Political Science

Psychology

Sociology

Spanish

Speech-Communication

Women's Studies

Condensed descriptions of major requirements for these degrees are given with course listings under department headings in this bulletin. Each major's departmental office has complete descriptions of their major and minor requirements. The departments also have advisers to advise you in your major.

A copy of the 1994-96 CLA Bulletin is essential to the CLA degree candidate. It can be obtained by calling Admissions, 625-2008. In addition, a copy of "Pursuing a Bachelor's Degree through Continuing Education and Extension/University College" should be obtained from CEE Counseling, 314 Nolte Center, 625-2500.

### Changes in attendance and graduation plans

Admitted CLA students must submit to their college advising office a "leave of absence and noncontinuation form" if they do not plan to enroll in an upcoming quarter.

Continuing Education and Extension/University College B.A. candidates usually follow the general education requirements in use at the time of their

formal admission to CLA. The current requirements are described below. Advanced transfer students entering fall 1996 or after must also meet these requirements. Students absent from CLA for more than two years, if they have fewer than 60 credits, must complete the graduation requirements in effect at the time they reenter. Those with 60 or more credits at the time of last attendance may elect to satisfy either the former or the current requirements although they are encouraged to complete the current requirements.

For questions regarding leaves of absence or graduation requirements, students are encouraged to contact their CLA advising office or CEE Counseling at 625-2500.

### Liberal education requirements

Student formally admitted to CLA with fewer than 39 transferrable credits are required to complete the Twin Cities campus liberal education curriculum. Students who were formally admitted to CLA before fall 1994 may petition to complete the current liberal education curriculum or may opt to complete the former CLA general education curriculum. Beginning in fall 1996, all transfer students admitted to CLA will be required to complete the Twin Cities campus liberal education curriculum.

The new Twin Cities campus liberal education curriculum is described on page 506. The former CLA general education curriculum is described below. Consult with your academic adviser to determine which curriculum applies to you.

### CLA former general education curriculum

*Note: Transfer students who have completed an Associate of Arts (A.A.) degree in 1986 or thereafter from a Minnesota community college have completed Writing Practice and Groups A, B, C, and D automatically. Second language, World Studies and Cultural Pluralism may still be required, depending on the type of major or bachelor's degree sought. If you completed an A.A. before 1986 or have further questions, contact an adviser at 625-2500.*

### English Composition Requirement

Writing Practice requirement or exemption and 3000-level writing course designated by the major department.

### Second Language Requirement

The study of a second language is considered essential for a liberal education. The College of Liberal Arts expects students to begin second language study in high school. Knowledge of a second lan-

guage gained before entering CLA may be used to meet part or all of the language requirement. Students who are unsure about their level of proficiency may consult a language department or a college office adviser for placement assistance. Normally, one to two years of high school study equals one quarter of college study. Students may repeat language study completed in high school, but it is to their advantage to start their college work at as high a level as possible. International students whose primary language is not English are exempted from the requirement. They may not earn credit for skills courses in their primary language.

**Graduation requirement:** The graduation requirement for the B.A., B.I.S., and B.F.A. degrees requires students to demonstrate proficiency usually attained after the first six quarters of college study in one language by passing a graduation proficiency examination that tests reading, writing, listening, and speaking skills.

For students who entered CLA prior to fall 1988, the second-language requirement for the B.I.S. is different. Please contact your B.I.S. adviser at 624-8006.

**Preparation requirement:** All entering students are expected to meet the University's second language entrance requirement (two years of high school language instruction).

All B.A., B.F.A., and B.I.S. students who register for French, German, or Spanish courses beyond the entrance requirement, must pass the appropriate entrance proficiency examination.

Students who meet the entrance standard may continue their study at higher levels in the same language or may begin study in another language.

Study abroad programs through the Global Campus include courses that may fulfill second language requirements. For information, call (612) 625-3379.

Further information about the former general education curriculum and group distribution requirements in CLA (now replaced by the liberal education requirements) is available from your CLA adviser or at CEE/UC Counseling; telephone 625-2500.

### **Bachelor of Fine Arts (B.F.A.)**

The Department of Art and the Dance Program offer the Bachelor of Fine Arts to students who demonstrate superior professional promise. They are "performance" degrees; students must apply through the departments to be accepted into the programs. Application involves the presentation of a portfolio or an audition. Standard CLA requirements are modified somewhat for students in the degree programs. B.F.A. students must complete

the second language requirement. Students should contact the department concerned for details or call CEE/UC Counseling, 625-2500. This degree is not available entirely through Extension.

### **Bachelor of Music (B.M.)**

The School of Music offers the B.M. degree for students who demonstrate superior professional promise in the areas of performance, jazz studies, music education, and music therapy. Students must apply through the department to be accepted into the program. Students should contact the department concerned for details or call CEE/UC Counseling, 625-2500. This degree is not available entirely through Extension.

### **Bachelor of Science (B.S.)**

The Bachelor of Science degree is offered in six areas: child psychology, speech and hearing science, economics, geography, sociology, and urban studies. Its requirements are more concentrated than those of the B.A. program. Usually, no second language after admission is required for the B.S., although there are departmental exceptions (e.g. geography). Some of these majors are not entirely available through CEE/UC.

For further information, call CEE/UC Counseling, 625-2500.

### **Bachelor of Individualized Study (B.I.S.)**

The Bachelor of Individualized Studies degree enables students to design an individualized program of study based on their personal academic objectives. Program proposals must define three areas of concentration, one of which may be outside CLA (maximum of 40 non-CLA credits). Proposals must be planned with a B.I.S. adviser and approved by CLA faculty advisers. CLA general education requirements are the same as for the B.A. degree. For further information about the B.I.S. degree or the Individually Designed Interdepartmental Major for the B.A. degree, call CEE/UC Counseling, 625-2500, or CLA Individualized Degree Programs, 624-8006.

### **College of Liberal Arts Honors Program**

Continuing Education and Extension/University College students may work toward graduating with the honors designations *cum laude*, *magna cum laude*, or *summa cum laude* through the College of Liberal Arts Honors Program. Students who are earning 50 percent A's in all of their University of Minnesota credits may be eligible to enter the Honors Program. Honors advisers will work with CEE/UC students to help them develop appropriate honors courses to meet honors graduation require-

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## General Information

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ments. Each year several Extension students graduate with honors. Students interested in working toward honors graduation should call the CLA Honors Program, 624-5522, and make arrangements to talk with an adviser.

### **Dean's List and CLA Scholars**

Each quarter, the college publicly recognizes superior academic performance through transcript memoranda, notices posted outside the Dean's Office in Johnston Hall, and announcements to academic departments.

To appear on the Dean's List, you must complete at least 12 credits and earn a quarterly G.P.A. of at least 3.66. To be recognized as a CLA Scholar, you must complete at least 15 credits and earn a quarterly G.P.A. of at least 3.75. CLS Scholars are invited by the Dean to a special reception and receive a certificate recognizing their accomplishment.

Extension registrations are included in determining these honors. The G.P.A. calculation used for the Dean's List and CLA Scholars differs from that which produces the transcript G.P.A. If you believe that you qualify for either list but are not included, please consult with the staff in 106 Johnston Hall.

An official letter verifying that a student in a combined CEE-CLA degree program has achieved the Dean's List may be requested in 106 Johnston Hall. Students also may request that this information be sent at no charge to their hometown newspapers.

## **Carlson School of Management**

### ***Bachelor of Science in Business (B.S.B.)***

The B.S.B. degree may be earned through Continuing Education and Extension/University College. Admission to the program is competitive, and students wishing to complete the B.S.B. degree through Extension should talk with an adviser in CEE/UC Counseling (625-2500) as soon as they have made this decision.

Candidates for the degree complete a minimum of 180 credits, part of which (upon evaluation) may be transferred from other accredited colleges or universities. The first 90 credits involve the completion of certain pre-management requirements through Extension courses or while registered in the College of Liberal Arts of the University of Minnesota. Students planning to complete pre-management work over a longer period of time, such as five years, are cautioned that requirements for admission to the Carlson School of Management (CSOM) are subject to change. *Students are responsible for*

*consulting an adviser annually regarding pre-management and admission requirements.*

The Carlson School Undergraduate Studies office offers Monday evening appointments for CEE/UC students. Call 624-3313 for information.

**Grading policy**—The Carlson School of Management uses a plus/minus grading system for all CSOM classes. For more information, contact an adviser at 624-3313.

Upon completion of the pre-management program, students interested in a business degree must make formal application to the school. *A minimum of 40 credits of upper division Carlson School of Management course work (3000-level and 5000-level courses offered by departments in the school) must be completed after admission to the Carlson School.*

Credits earned at universities outside the United States, armed forces college credits, or credits earned through special examination may be accepted at the discretion of the Carlson School of Management staff. Contact a Carlson School of Management adviser at 624-3313 to discuss acceptability of such credits.

All Extension students admitted to the B.S.B. degree program are responsible for information in the bulletin of the Carlson School of Management (available at 625-2008 or via internet Gopher), the current Pre-Management and Upper Division Planning Sheet to that bulletin (call 624-3313), and the Extension Classes bulletin.

**Application deadlines**—Fall Quarter, June 1. Spring quarter, January 15

**Second Language Requirement**—If you graduated from high school after June 1986 and you are admitted to the CSOM fall of 1993 or later, you must have completed two high school years or three college quarters of the same second language prior to admission to the CSOM. Students who graduated high school June 1986 or earlier are exempt from the second language requirement.

**The Carlson School requires the following lower division requirements for admission into the B.S.B. program:**

**Management-Related "Tool" courses** (A/F grading required)

Introduction to Financial Reporting (Acct 1050 or equivalent)

Microeconomics (Econ 1101 or equivalent)

Macroeconomics (Econ 1102 or equivalent)

Information and Decision Sciences (IDSc 1010 or equivalent)

Operations and Management Sciences (OMS 1020 or equivalent statistics course)

Calculus (Math 1142 or 1251 or equivalent)



## Other lower division major requirements

General Psychology (Psy 1001 or equivalent; A/F grading required)

One symbolic systems course chosen from the following list: CSci 3101, 3102, 3104, 3113; Engl 3851; Ling 3001, 3111, 5401, 5402; Math 1131, 1252 (formerly 1221); Phil 1001. (A/F grading required)

One international/global social science course (A/F or S/N grading)

## Additional University of Minnesota liberal education requirements

Students applying to the Carlson School in Fall 1996 or later will complete the new University-wide liberal education requirements described on page xxx.

Students applying to the Carlson School for Spring 1996 should consult an adviser at 624-3313 about requirements.

## Electives (A/F or S/N grading)

In addition, applicants to the Carlson School of Management must have 90 total credits by the time of admission. Numerous University of Minnesota courses can be used toward elective credit in the B.S.B. Many students use second languages as their electives. Please contact Undergraduate Studies at 624-3313 to determine if a course you're interested in would count for general elective credit in the Carlson School.

## General admission requirements for all students applying to the Carlson School of Management

The Carlson School of Management admission decision is based on academic, personal, and professional achievement.

To be considered for admission, the following are required:

1. Course work completed or in progress to total 90 credits by the time of admission.
2. Completion of the following "tool" courses on an A-F basis by the time of enrollment: Acct 1050, Econ 1101 and 1102, IDSc 1010, OMS 1020, and Math 1142 or 1251. Although one or two tool courses may be in progress at the time of application, all else being equal, preference is given to students who have completed all the tool courses.
3. Completion of all but five pre-management courses by the time of application. Any of the tool courses in progress at the time of application are included in this total.
4. An overall grade-point average in all transferable and tool credits of approximately 2.80\*. A course taken fall 1992 or later in which a D+, D, D-, was earned may be repeated once. Although the cred-

its will be counted once, the original and second grades will be averaged in determining the grade-point average for admission to the CSOM. (Credits of N earned fall quarter 1987 and later and all grades of F count in the grade-point average used for admission.)

\* (As space permits, students with strong credentials, such as significant leadership experience or particularly rigorous course work, but slightly lower grade-point averages may be considered for admission.)

5. Equivalent courses taken at other institutions (upon evaluation) may be substituted for required University courses.
6. In addition to the application, students are asked to submit an Application Addendum to provide additional information about their background and achievements to allow a broader view of their qualifications for admission.

## Requirements for graduation from the Carlson School of Management

Students previously admitted to the CSOM who have not taken courses for one year or longer should consult with a Carlson School adviser at 624-3313 before continuing.

1. Complete a minimum of 180 quarter credits with a minimum of the final 45 credits taken at the University of Minnesota.
2. Complete a minimum of 72 credits in business and economics course work and at least 72 credits in non-business and economics course work.
3. Complete 40 credits of upper division business courses after official admission to the Carlson School of Management. (Upper division business courses are those 3000-level and 5000-level courses offered by departments in the school and listed in the Carlson School of Management bulletin.)
4. Have a minimum grade average of C (2.00) in all work taken after admission to the Carlson School of Management and in all upper division business administration courses.
5. Complete upper division course requirements for the appropriate degree program as listed below (either the general management program or accounting program). Pre-management course requirements listed above also must be completed and cannot be used to satisfy the upper division requirements listed below. *Accounting students must complete 50 percent of their total number of accounting classes (usually 5 courses minimum) at the University of Minnesota.*
6. A minimum of 135 transferable credits completed upon graduation must be on the A-F grading system.

## General Information

**Grade-Point Average**—Each credit of N and F earned after admission to the Carlson School of Management is assigned 0 grade points and will be included in the grade-point average. No degree credit is granted for a grade of N or F.

**Honors**—Students with the appropriate grade-point average in the Carlson School may graduate with distinction (3.75-3.89) or with high distinction (3.9-4.0). For information, call the Carlson School of Management, 624-3313.

**Bachelor of Science in Business—Requirements Common to Both Accounting and General Management Programs**

**Note:** Students who take a course without fulfilling a prerequisite may not take the prerequisite course for credit later except by permission from the Undergraduate Studies Office.

**I. 28 credits of Core Courses (A-F grading required)**

Acct 3001, Introduction to Management Accounting

Mgmt 3001, Fundamentals of Management

BFin 3000, Finance Fundamentals

IDSc 3030, Information Systems and Information Management (prerequisites are IDSc 1010 and OMS 1020)

Mktg 3000, Principles of Marketing

OMS 3000, Introduction to Operations Management

IR 3002, Personnel and Industrial Relations

**II. 4-credit Economics course selected from the following (A-F grading required)**

Econ 3101, Microeconomic Theory

Econ 3102, Macroeconomic Theory

Econ 3105, Managerial Economics

Econ 3701, Money and Banking

**III. 5-credit Senior Policy Course (A-F grading required) Prerequisite completion or concurrent registration in core courses.**

Mgmt 3004, Business Policy: Strategy Formulation and Implementation

**IV. 12 credits Communications course (A-F grading required)**

Comp 3022, Critical Reading and Writing for Management

Comp 3032, Preprofessional Writing for Business

One course from the following:

Rhet 3254, Advanced Public Speaking

Rhet 3266, Discussion Methods

Spch 1101, Fundamentals of Speech Communication

Spch 3111, Leadership Communication

Spch 3411, Small Group Communication Processes

Spch 3605, Public Speaking (instructor approval required)

Spch 5422, Interviewing and Communication

Th 3803, Topics: Platform Performance

**V. 4-credit International course (A-F grading required).** One course selected from a prescribed list of courses in the following areas: AgEc, BGS, Econ, FSMg, Geog, IntR, Pol, PA. Check with an adviser for courses that satisfy this requirement at the CSOM undergraduate advising office, 624-3313.

**Bachelor of Science in Business—General Management Program Additional Major Requirements**

**I. Elective credit, to reach 180,** usually selected from the College of Agriculture, Institute of Technology, the College of Liberal Arts, or the Carlson School of Management

**II. 20-24 credits in Area of Emphasis (A-F grading required for all courses comprising the area of emphasis—listed below)**

Emphases are available in Actuarial Science, Banking, Finance, Small Business and Entrepreneurship, Marketing, Logistics Management, Operations Management, General Management, and a self-directed emphasis. Consult the Carlson School of Management bulletin (call 625-2008 to request one) and a Carlson School adviser (624-3313) for details.

**Bachelor of Science in Business—Accounting Program Additional Major Requirements**

For students in the accounting program, the following courses must be completed (in addition to the courses listed above that are common to both the regular and accounting program); A-F grading required.

BLaw 3058, Introduction to Law, and the Law of Contracts and Agency

Acct 3101, Intermediate Financial Reporting

Acct 3201, Intermediate Management Accounting

Acct 5102, Advanced Financial Reporting I

Acct 5125, Auditing Principles and Procedures

Acct 5135, Introduction to Taxation

8 credits upper division Accounting Electives; A-F grading required (Acct 3199 and Acct 3299 do not apply)

## Institute of Technology (B.S.)

Many credits for a bachelor's degree in Civil Engineering, Computer Science, Electrical Engineering, and Mechanical Engineering can be completed through registration in Extension classes. However, students must be formally admitted in these programs. See separate department sections for more information.

**Residency Requirement**—A student earning a bachelor's degree must complete 45 credits after admission to the Institute of Technology, and at least 30 of those credits must be completed in the senior year.

**Admission**—Students planning to complete degrees in the above fields primarily through Extension classes should contact an adviser in the appropriate department at an early date and *must apply for admission to the Institute of Technology after completing lower division requirements*. Contact CEE Counseling at 625-2500 for more information and application forms.

A copy of "Pursuing a Bachelor's Degree in Continuing Education and Extension/University College" can be obtained from the CEE Counseling Office, 314 Nolte Center. For a current Institute of Technology bulletin, call 625-2008.

**Honors**—Students with the appropriate grade-point average may graduate with "distinction" or "high distinction."

The following are tentative schedules designed to assist students in Civil Engineering, Electrical Engineering and Mechanical Engineering in planning a program of studies leading toward the completion of a certificate or degree program (for Computer Science courses, see the schedule in the *Course Offerings* section). Every effort will be made to adhere to the schedules given here, but they are subject to change whenever necessary. Courses in addition to those listed may also be offered. For specific degree requirements, please consult the most recent Institute of Technology Bulletin.

### Civil Engineering

**Students must be formally admitted to upper division Civil Engineering in the Institute of Technology.** A degree will not be granted based on course completion alone. Contact the CEE Counseling Office at 625-2500 for information.

(See *Institute of Technology Bulletin* for full course descriptions and offerings.)

## Electrical Engineering Curriculum Guide

See also the current Institute of Technology bulletin for full course descriptions.

The Bachelor of Electrical Engineering (B.E.E.) requires completion of a minimum of 192 quarter credits. Further information about the B.E.E. program can be obtained by requesting a copy of the Electrical Engineering Curriculum Guide from the Department of Electrical Engineering, 4-178 Electrical Engineering/Computer Science, University of Minnesota, 200 Union Street S.E., Minneapolis, MN 55455; (612) 625-3300.

The general requirements listed below apply to students enrolled in the lower division and planning to qualify for the B.E.E. degree.

**Students must be formally admitted to upper division Electrical Engineering in the Institute of Technology.** A degree will not be granted based on course completion alone. Contact CEE/UC Counseling for information, (612) 625-2500.

### Lower Division Electrical Engineering Program

Comp 1011, Writing Practice—5 credits

Math 1251, 1252, 1261, 3251, 3252, 3261 or Math 1211, 1221, 1241, 3311, 3321, 3331, Calculus, Multivariable and Vector Analysis—24-27 credits

Phys 1251-1252-1253, General Physics (with lab) or 1271/1275, 12181/1285, 1291/1295—12-15 credits

Phys 1254 or 3501, Modern Physics—4 credits

Chem 1051, 1052, General Principles of Chemistry—4 credits (*Chem 1004-1005 or Chem 1014 may be substituted for Chem 1051-1052*)

CSci 3113, Introduction to Programming in C—4 credits

CSci 3121, Survey of Data Structures and Algorithms—4 credits

EE 1000, Introduction to Electrical Engineering—1 credit (optional)

EE 1400, Circuits Laboratory—1 credit

EE 3009-3010, Linear Circuits I-II—8 credits

EE 3351-3352, Introduction to Logic Design, Introduction to Microprocessors—8 credits

Liberal education electives

Technical elective (AEM 3036 or ME 3301)—4 credits

CREDIT TOTAL: 88-94

## General Information

**B.E.E. degree via distance education**—The Department of Independent Study in Continuing Education and Extension/University College also offers a Bachelor of Electrical Engineering program that uses distance education and study by correspondence. In this program, attendance in regularly scheduled classes is unnecessary. Instead student receive video tapes of class lectures and send in their lesson assignments via mail and receive the graded work and solutions by mail. Further information about this program can be obtained by contacting Teresa Fruen, academic adviser in the CEE/UC Counseling department at (612) 625-5041 or by internet at [tfruen@mail.cee.umn.edu](mailto:tfruen@mail.cee.umn.edu).

### Mechanical Engineering

It is possible to earn all but approximately 24 to 28 credits toward a bachelor's degree in Mechanical Engineering through Extension Classes. The Mechanical Engineering degree can then be completed after a limited amount of day school attendance or through University-Industry Television for Education (UNITE). Depending upon the selection of the coherent elective option, students may need to take more courses in day school.

**Students must be formally admitted to upper division Mechanical Engineering in the Institute of Technology.** A degree will not be granted based on course completion alone. Contact CEE Counseling for further information (625-2500).

The following information indicates in a general fashion how a program of study leading ultimately to the award of a bachelor's degree in Mechanical Engineering might be approached. The courses listed are required courses which are often offered through Extension Classes. They do not include all requirements for the bachelor's degree in Mechanical Engineering. See the current Institute of Technology Bulletin for full requirements and course descriptions. (Students must satisfy the Institute of Technology admission and residency requirements given at the beginning of this section.)

#### First year, 20 credits:

Math 1251 (formerly 1211) fall quarter (4 credits)  
ME 1025 fall quarter (4 credits)  
Math 1252 (formerly 1221) winter quarter (4 credits)  
CSci 3101 winter quarter (4 credits)  
Math 1261 (formerly 1241) spring quarter (4 credits)

#### Second year, 24 credits:

ME 3900 or Stat 3091 fall quarter (4 credits)  
Math 3261 fall quarter (4 credits)  
Phys 1251 or 1271/1275 fall semester (4 credits)  
AEM 1015 winter quarter (4 credits)

Phys 1252 or 1281/1285 spring semester (4 credits)  
Math 3251 spring quarter (4 credits)

#### Third year, 21 credits:

Phys 1253 or 1291/1295 fall semester, 4 credits  
AEM 3016 winter quarter, 4 credits  
AEM 3036 spring quarter, spring quarter  
Comp 1011 spring quarter, 5 credits

#### Fourth year, 24 credits:

ME 3201 fall quarter, 4 credits  
ME 3301 fall quarter, 4 credits  
ME 3203 winter quarter, 4 credits  
ME 3303 winter quarter, 4 credits  
ME 3205 spring quarter, 4 credits  
ME 5342 spring quarter, 4 credits.

#### Fifth year, 8 credits

IEOR 3000 fall quarter, 4 credits  
ME 3701 spring quarter, 2 credits  
ME 3702 spring quarter, 2 credits. *ME 3701 and 3702 meet concurrently.*

Day Only, or Infrequent Extension Offerings:

MatS 3400

Senior Laboratory requirement

ME 3020

ME 5254 (Summer Extension)

ME 5260

Chem 1051, 1052 (Substitute Chem 1004 and 1005 or Chem 1014)

EE 3009, 3005/3006

Coherent upper division technical elective program; many courses are available in Extension Classes. Contact an I.T. adviser at 624-8504 for more information.

Liberal education courses—I.T. liberal education requirements are explained in detail in the Institute of Technology bulletin available by calling 625-2008.

### University College (B.A., B.S.)

University College (UC) offers students on all University of Minnesota campuses the opportunity to design an individualized baccalaureate degree program drawing upon courses, faculty, and other learning resources from across the University. Students pursuing one of the two UC program options, The Program for Individualized Learning or the Inter-College Program (ICP), are assisted by academic and faculty advisers in the development and execution of an academic program tailored to meet their specific educational goals. It is recommended that students who are interested in either program attend an informational advising session. Each program holds these small group information sessions every week. Attendance can be scheduled through

each program's office. The advising offices for these programs are located on the second floor of a building without an elevator. Please call ahead to make arrangements for an alternative meeting location if accessibility is a problem.

**The Inter-College Program (ICP)** allows students to plan and pursue a cross-college academic program suited to individual needs. ICP is appropriate for those students who have clearly defined academic goals and discover they cannot achieve those goals without an inter-college curriculum. A student's ICP plan is drawn up with guidance and approval from ICP advisers and designated faculty advisers. The degree program may include two or three areas of concentration, or may integrate courses from two or more colleges into a cohesive theme. Depending on how a student fulfills liberal education requirements, ICP leads to either a bachelor of arts or a bachelor of science degree.

To be considered for admission to ICP, a student must have a 2.00 grade-point average; completed at least 80 credits of college work (minimum of 15 credits from the University of Minnesota and at least 9 credits of upper division work); completed designated prerequisites and/or meet grade-point average requirements for areas with concentration or collegiate grade-point restrictions; and prepared an approved ICP degree plan and goal statement.

Deadlines for submitting applications to ICP vary each year. For more information on application deadlines and to schedule an ICP First Step meeting, call 624-2004 or visit ICP in 107 Armory.

**The Program for Individualized Learning** serves students with clear educational goals who wish to design and carry out individualized B.A. or B.S. degree programs. Students tend to select the program because they value the freedom to make significant choices about what and how they learn, because they have experiences they can use as foundations for further learning, and because they want to use a variety of educational resources at the University and in the community.

Students are admitted on the basis of evidence that they have the attributes and academic skills needed to pursue a self-directed degree program, e.g., skills in writing, project design, and educational planning. A degree program can incorporate a variety of learning resources, including University classes, independent study courses, and self-designed projects. Knowledge gained from independent learning prior to admission may be applied if it can be demonstrated and evaluated as college-level learning.

Program for Individualized Learning students design their degree programs around a set of standards, called graduation criteria. The criteria com-

bine learning in a major area of study with learning in the liberal arts. Students pursue programs in a wide variety of fields, often studying in many disciplines and creating new and innovative areas of study. Examples of recent degree programs include: international business, youth studies, reconstruction archaeology, Irish studies, and folk music and folklore.

For more information about the Program for Individualized Learning, students should read the University College Bulletin and arrange to attend an information session. Call (612) 624-4020 or stop by the office in 107 Armory.

**University College Independent Study (UC 3075)** is an undergraduate independent study course listing available to students who wish to pursue projects that go beyond the scope of any single department or college of the University. Projects are interdisciplinary in nature or are done in departments that do not have an undergraduate independent study course for nonmajors. Students will be asked to select an appropriate faculty monitor and to complete the UC 3075 Independent Study contract prior to registering. Students may take 3 to 15 credits of UC 3075. Additional information may be obtained from the Inter-College Program Office of University College, 107 Armory, (612) 624-2004.

## Graduate degrees

Be sure to read the section on graduate credit, page 40.

### *Master of Arts (M.A.) in English*

The Department of English in cooperation with the Graduate School offers a master of arts degree specifically designed to meet the needs of Continuing Education and Extension/University College students. The degree is in every way equal to the usual day-program degree, but the advising system, class scheduling, and special activities offered recognize that CEE/UC students lead complex lives. This degree is particularly suited to adult students who see their graduate study as a means for professional advancement or personal growth. Typically, M.A. students do not go on to doctoral study.

### **The M.A. Program with an Emphasis on Literary Genre**

The M.A. in English with an emphasis on literary genre focuses on issues in literary study and allows considerable flexibility in designing a course of study. The basic requirements are as follows:

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- 1. 44 credits (11 courses) of course work.** Includes 8 credits (2 courses) at the 8000 level, including one seminar, and 8 credits (two courses) in related fields outside of English.
- 2. Reading knowledge of one modern or classical language.** A student can meet the requirement in one of three ways: by having completed at least 15 college-level quarter credits in the language with a grade of A (or 20 quarter credits with an average grade of B); by completing one of several special programs of course work designed to develop foreign language skills; or by scoring well on the Graduate School Foreign Language Test (GSFLT) offered through University Counseling Services.
- 3. Qualifying examination taken during the course of your studies.** Offered twice a year, in the fall and spring quarters, this four-hour examination asks the student to analyze and interpret two works announced one quarter in advance. A student must pass the examination no later than four years after admission.
- 4. A writing project: three "Plan B" papers.** Instead of a traditional master's thesis, a student completes three major writing projects on topics defined with faculty members.

This degree allows the necessary flexibility to plan a course of study from courses scheduled in the evening. Under special circumstances, students may enroll in day school classes as well.

### *Master of Fine Arts (M.F.A.) in Creative Writing*

The Program in Creative Writing in the Department of English in cooperation with the Graduate School offers an M.F.A. degree designed to meet the needs of Continuing Education and Extension/University College students. The degree is in every way equal to the usual day-program degree, but recognizes that CEE/UC students lead complex lives. The M.F.A. is designed as a three-year professional degree for students who see themselves primarily as practicing writers. The M.F.A. is the highest degree offered in this field. The basic requirements are as follows:

1. 68 credits (13 courses and 16 credits of "creative project" registration). Includes a multi-genre course offered each fall for the incoming class, 20 workshop credits, 20 credits in language and literature, 8 credits in related fields (including one course in a related artistic discipline).
2. The M.F.A. essay. This consists of an assigned essay or essays on a series of texts selected by the faculty in creative writing. The essay will generally be written in the student's second year.

3. The book-length manuscript. A student will complete a book-length manuscript in the genre of choice for the degree. Much of the work on this manuscript will be completed through the 16 credits of creative project registration.

The degree allows the necessary flexibility to plan a course of study from courses scheduled in the evening. Under special circumstances, students may enroll in day school classes as well.

### **Admission Procedures for the Master's degrees in English**

General information about admission to the M.A. and M.F.A. programs can be found in the current *Graduate School Bulletin*. More information and application forms may be obtained from the English Graduate Studies Office in 209 Lind Hall (625-3882).

**Requirements:** You do not need to have an undergraduate degree in English, but you should have a strong background in literature and related fields with a minimum of 16 credits in English (at least 12 in upper division work).

**Admission Criteria:** We judge your application on the basis of your previous academic record, Graduate Record Examination scores, proposal for graduate study in CEE, letters of recommendation, and writing samples. No single factor determines acceptance.

**How To Apply:** The University of Minnesota requires simultaneous application to the Department of English and to the Graduate School. The admission procedure is lengthy. If your file is incomplete, or if your materials are sent to the wrong office, your application cannot be reviewed. Please follow the process described below with care to ensure that all materials arrive by the admission closing dates.

**The following materials should arrive at the Graduate School Admissions Office by December 29, 1995** (Graduate School, University of Minnesota, 309 Johnston Hall, 101 Pleasant Street S.E., Minneapolis, MN 55455; telephone 612/625-3014).

1. Completed application for admission. Please indicate that you are applying to the M.A. or M.F.A. program through Continuing Education and Extension/University College. Write "CEE" at the top of the application form and in item #13 (Proposed Major Field) on the form. Indicate which degree you are applying for, either the M.A. degree in literary genre or the M.F.A. in creative writing. Applicants to the program in writing should specify their intended area of specialization (fiction, poetry, or nonfiction).
2. Official transcripts from all colleges or universities attended.

3. Application fee (\$30; subject to change).
4. Applicants whose native language is not English should submit official scores from the Test of English as a Foreign Language (TOEFL). (An overall TOEFL score of at least 620 is required for admission to this program.) For information about this examination, write to TOEFL, Box 899, Princeton, NJ 08541, U.S.A.

**The following materials should arrive at the English Graduate Office by January 10, 1996** (Department of English, University of Minnesota, 209 Lind Hall, 207 Church Street S.E., Minneapolis, MN 55455; telephone 612/625-3882, fax 625-8565).

1. Letters of recommendation from three people who can judge your academic performance and your promise as a graduate student.
2. Official scores from the general test (the aptitude portion) of the Graduate Record Examination (GRE). The departmental code is 2501. Scores from a GRE taken within the last five years are required. For information on registering to take this exam, contact the Educational Testing Service, Box 955, Princeton, NJ 08541, telephone (609) 771-7670; or University Counseling Services, University of Minnesota, 109 Eddy Hall, 192 Pillsbury Drive S.E., Minneapolis, MN 55455, telephone (612) 624-2815, if you live near the University of Minnesota campus; or your local university or college counseling service.

Although the advanced test in literature is not normally required, if your undergraduate transcript is a "narrative transcript," or if it contains "pass/no-credit," "credit," or other ungraded notations for a substantial number of courses taken during your junior or senior year, you should also take the GRE Subject Test in Literature in English and have the score sent to the Department of English graduate office. GRE scores are not required of students whose native language is not English, although a TOEFL score is.

3. A sample of expository writing, usually a paper written for a literature course. If you are applying for the M.F.A. in creative writing, you also submit a substantial sample of your creative work (fiction, poetry, or nonfiction) and a description of your writing background.
4. A proposal, perhaps a letter, in which you write about yourself as a reader, writer, and scholar—saying if you can why you chose graduate study in English through Continuing Education and Extension/University College and how it might fit in your life.

Although the Graduate School may consider your application complete and notify you accordingly

once they have received your application form, transcripts, and fees, the English department cannot begin to review your application until all the additional materials described above have been received. The English department cannot notify you when your application is complete or when materials are missing. Contact the English Graduate Office (612/625-3882) to find out the status of your application file. Upon review of your completed file, the department will forward its recommendation to the Graduate School. The Graduate School, which is the official admitting unit, makes the final decision.

**Application Deadlines:** All application materials must be in the English Graduate Office by January 10, including both the materials sent directly to that office and the materials sent to the Graduate School. You must therefore be sure to send your application, transcripts, fee, and TOEFL Score (international students only) to the Graduate School at least two weeks in advance of the January 10 deadline. While January 10 is the application deadline for all programs in the department, applications to the *Program in Creative and Professional Writing* will be considered through March 15 if space is available.

### ***Master of Business Taxation (M.B.T.)***

This program is designed to help students acquire a conceptual understanding of taxation and to develop technical competence in the practical application of the rules of taxation in business and personal decision making. This Carlson School of Management program is offered only in the evening by the Department of Accounting through Continuing Education and Extension/University College. It is designed to accommodate the nontraditional student who is employed during the day and enrolled in the program on a part-time basis during the evening. Students enrolled part time can expect to complete the program in approximately two to three years. Students enrolled full time can complete the program in a shorter period.

#### **Requirements for the Master of Business Taxation Degree**

**Degree requirements**—A student is required to have gained, through course work, a common body of knowledge in the various areas of business. When the appropriate course work is lacking, a student must make up the deficiencies. These courses may be taken after admission.

A student must complete 46 credits, including 16 credits in business, economics, and accounting; 14 credits in the fundamentals of tax, tax research, tax

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procedures, and corporate tax; and 16 credits of elective tax courses. A student must maintain a 3.00 grade-point average.

**Special admission requirements**—Results of the Graduate Management Admissions Test (GMAT) or the Law School Admission Test (LSAT) are required. Applicants will be considered for admission during fall, winter, spring, or first summer session.

For further information, contact Master of Business Taxation Program, 645 Management/Economics Building, University of Minnesota, 271 19th Ave. S., Minneapolis, MN 55455; telephone (612) 624-7511.

### ***Graduate Minor Program in Gerontology***

A graduate minor program in gerontology may be pursued at both the Ph.D. and the M.A./M.S. levels. The program for an individual student is developed in consultation between the student and the Director of Graduate Studies designated by the All-University Council on Aging.

#### **Requirements for the Graduate Minor in Gerontology**

**Degree requirements**—The course "Multidisciplinary Perspectives on Aging" (4 credits) is required for both the doctoral and master's minor programs. This course focuses on a multidisciplinary introduction to aging and the aging process. The course is cross-listed in seven departments or colleges of the University.

The master's degree minor program requires a minimum of nine graduate-level quarter credits including the "Multidisciplinary Perspectives on Aging" course (4 credits). The remaining five or more credits would be taken from the designated course list, available from the All-University Council on Aging, in two of the following four areas: biological or medical sciences; psychological, behavioral, or social sciences; humanities or fine arts; public policy, practice, economics, politics, or law.

The doctoral degree minor program requires a minimum of 18 graduate-level quarter credits including the "Multidisciplinary Perspectives on Aging" course (4 credits). The remaining 14 or more credits would be taken in courses selected from the designated course list available from the All-University Council on Aging. The program must include at least two courses in two or more of the following four areas: biological or medical sciences; psychological, behavioral, or social sciences; humanities or fine arts; public policy, practice, economics, politics, or law.

**Admission requirements**—Graduate students electing the Ph.D. or M.A./M.S. minor program in gerontology must have been accepted by the Graduate School and the major program in which they are enrolled. Admission to the program will be contingent upon enrollment in good standing within a recognized Ph.D. or M.A./M.S. degree granting program at the University of Minnesota.

For further information, call the All-University Council on Aging at (612) 625-9099 for the current designated course list and to meet with the Director of Graduate Studies. Or write Director of Graduate Studies, Graduate Minor Program in Gerontology, All-University Council on Aging, University of Minnesota, 330 Humphrey Center, 301 19th Ave. S., Minneapolis, MN 55455-0421.

### ***Master of Education (M.Ed.)***

Master of Education degrees offered by the College of Education and Human Development are available through Extension Classes. A complete program currently is offered in teacher leadership and in youth development leadership. In addition, many courses required for other M.Ed. degrees are available through Extension.

These 45-credit master's degree programs are intended for licensed teachers and other educational professionals who wish to enhance their knowledge and skills for career advancement and more effective teaching.

Call (612) 626-7196 or (612) 625-6501 for information about these and other graduate programs in education. For information about teacher licensure in Minnesota, call the State Department of Education at 296-2046.

### ***Master of Liberal Studies (M.L.S.)***

The Master of Liberal Studies is a new graduate degree program from Continuing Education and Extension/University College and the Graduate School.

The M.L.S. is designed for adult and part-time students—those with a bachelor's or previously earned advanced degree—and a lively intellectual curiosity and a desire to resume (or begin), on a part-time basis, the lifelong business of a liberal education. Evening classes and comprehensive student services provide the convenience that busy people need in continuing their educations.

Broadly interdisciplinary, the program helps students (1) to gain an appreciation of perspectives and methodologies across many academic areas and (2) to conduct inquiry that illuminates and critically examines significant topics that they want to study in depth.



### Admission to the program

- Consultation with the M.L.S. program director or the director of graduate studies before applying is recommended. Admission to the program is limited and is competitive.
- Application deadlines are September 29, 1995, and March 15, 1996.
- Although the M.L.S. is designed for working adults, there are no specific vocational implications related to admission or program requirements.
- The student must have an earned bachelor's degree from an accredited institution.
- Admission is based on academic record and other indicators of the student's ability to succeed in graduate study.

### Program features and requirements

The M.L.S. is a 44-credit program (11 courses) which can be readily completed in three years by taking one course each term, including summers. (Students may choose to accelerate or stretch out their course work, however.) The program encourages the student to propose and carry out his or her own unique interdisciplinary focus.

Curriculum requirements include the following courses:

- An introduction to graduate interdisciplinary liberal education (4 credits)
- Three M.L.S. seminars that are specially designed interdisciplinary courses (12 credits)
- Six elective courses drawn from 5000- and 8000-level courses in a variety of academic areas (24 credits)
- A final project course (4 credits)

The introductory course will be offered frequently and is designed to orient students to graduate study generally and in their area of interest; develop writing and research skills; explore issues in interdisciplinary study; acquaint students with each other and core faculty in the program.

The M.L.S. seminars are specially designed interdisciplinary courses offered on a variety of topics; at least one of these courses each year will emphasize scientific perspectives.

The electives may be selected from courses throughout the University's curriculum. Over 800 graduate-level courses are offered in the evening each year as well as directed research and directed study options. Consultation with a faculty adviser is expected.

The final project course is a "capstone" intended to complete the student's program and replaces a thesis and final written or oral exams.

For more information about admission and requirements, call (612) 625-9001.

### *Master of Social Work (M.S.W.)—Weekend Option*

Designed for people working in the helping professions who want an advanced degree and career credential, the Master of Social Work—Weekend Option offered by the School of Social Work allows students to complete the M.S.W. in two years of full-time study on Saturday and Sundays. Part-time options are also available.

This degree prepares students to work with clients in schools, clinics, hospitals, community centers, public and private agencies, and corporations. The M.S.W. also prepares professionals as community organizers, administrators, social planners, and lobbyists for policy reform. The M.S.W. is considered the terminal degree for professional social work practice and is required for advanced levels of social work licensure in Minnesota.

**Degree requirements**—The CEE/UC M.S.W. weekend offerings correspond to the School of Social Work curriculum in the Direct Practice Concentration. Students with an undergraduate degree in social work from a CSWE-accredited undergraduate program may apply for the 51-credit advanced standing option. Advanced standing students take 39 credits of course work plus a 12-credit internship (concurrently or in the summer). Studying full-time, this option can be completed on campus in Minneapolis in one calendar year.

The advanced standing option is also available on a part-time basis through distance education (two-way interactive video and audio) at different sites around Minnesota. Students can complete this part-time option in two to three years of study. Current sites are in Moorhead and Rochester, although other sites may become available in the future.

Students with a bachelor's degree in a field other than social work are eligible for the 75-credit option. Studying full-time, students can complete this degree in two years. Part-time study takes longer to complete the program. The 75-credit option consists of a foundation curriculum followed by the Direct Practice Concentration curriculum. Foundation course work consists of classes in human behavior in the social environment, social welfare history and policy, social work practice methods, and social work research. Students take two 12-credit internships (either concurrently or in the summer) and complete 51 credits of course work.

## General Information

**Admission requirements**—Applicants must have a bachelor's degree with a 3.00 g.p.a (preferred); 39 quarter or 26 semester credits in college-level social sciences; a course in human biology with content on physiological and anatomical development; a course in statistics; a minimum of one year of paid or volunteer experience in social work or a related human service field. Most applicants exceed these requirements, but some applicants who cannot meet these requirements may also be accepted.

For application information and materials, contact the Director of M.S.W. Admissions, School of Social Work, University of Minnesota, 400 Ford Hall, 224 Church Street S.E., Minneapolis, MN 55455; (612)624-1096 or 1-800-779-8636).

## Certificates

**Degree and certificate program requirements may change or programs may occasionally be discontinued. The University will make every reasonable effort to assist admitted students in completing a program.**

Students not certain they can devote the time necessary to earn a college degree may wish to consider a certificate program. Some certificate programs are regarded by business and industry as valuable professional and technical preparation for employment and promotion. Students are encouraged to consult with employers regarding the usefulness of the certificate in seeking new employment or possible promotional opportunities. With careful planning, some certificates can be, if the student wishes, a stepping stone to a degree. Work on a certificate may be done in Extension Classes, Extension Independent Study, Continuing Education for Women courses, day school, summer session, or any combination of these. (Certificate programs marked with **(IS)** are available entirely through Independent Study.)

A wide variety of certificate programs is administered by Continuing Education and Extension/University College (CEE/UC). 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 the subject matter. Certificate credit classes (course number begins with a "0" or is followed by a C, as in 0120C) are rarely transferable to a degree program.

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 through the University of Minnesota—Twin Cities campus. The residency requirement cannot be met by repeating courses at the University of Minnesota which have already been completed successfully at another institution. Courses need not be taken in order, except as prerequisites make it necessary.

Certificate requirements may be modified from time to time. There is no time limit on the use of credits. Students may not enroll in more than three certificate programs at one time.

Students interested in taking courses toward certificate programs on the S-N grading system should first consult an adviser at 314 Nolte Center, (612) 625-2500.

## Application

Students can obtain a copy of "CEE/UC Certificate Program Information" with an application form by contacting CEE/UC Counseling, (612) 625-2500, 314 Nolte Center. A nonrefundable \$20 application fee (VISA/Mastercard available) will be required with all applications. Students are urged to consult with an adviser early in their program, and before completing an application for admission, regarding application time, admissibility to a certificate, residency requirements, and specific admission information for each certificate.

Admission criteria vary among certificate programs. Admission decisions are based on previous college performance (better than a C average is required), educational objectives, and patterns of course work completed. Students will be asked to include a written statement outlining how the certificate program help to meet their educational goals. Students will be notified of admission status by mail approximately three weeks after all transcripts and application materials are received. If admitted, students will receive a written evaluation describing how previous college course work applies to their certificate program.

## Completion

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. A nonrefundable \$20 certificate fee (VISA/Mastercard available) will be required at the time the Certificate Completion Form is filed. Certificate application forms can be obtained from CEE/UC Counseling, 314 Nolte Center, (612) 625-2500.

Upon completion of a specified program with at least a C (2.00) overall average (including a 2.00 grade-point average in University of Minnesota courses), the student is awarded a certificate. Certificates are awarded by CEE/UC (not by individual University of Minnesota colleges). All certificates are dated and awarded as of each quarter of the academic year.

### Academic Progress

CEE/UC will determine academic progress for students enrolled in certificate programs. In addition, students receiving financial aid through the Office of Scholarships and Financial Aid (OSFA) will be held to a similar, but possibly different, standard. Financial aid recipients must meet **both** the college and the OSFA standard. For additional information, please refer to the Academic Progress section on page 35.

Students with excessive credits and problematic grade-point averages may have a hold placed on their record restricting their registration in Extension Classes.

### Continuing Education and Extension/ University College Honors

All CEE/UC Certificates may be earned with honors. A student earning a 3.00 to 3.49 grade-point average in University of Minnesota credits within the certificate will be awarded a certificate "with distinction" and 3.50 to 4.00 "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-F grading system.

Colleges at the University of Minnesota retain the right to determine honors requirements for a degree; therefore, earning a certificate with honors does not automatically gain a student entry into a college's honors program.

For further information concerning the Honors Program for certificate students, call CEE/UC Counseling, 625-2500.

### Guide to certificates offered through Continuing Education and Extension/ University College

- Accounting, page 526
- Alcohol and drug counseling education, page 523
- Arts, liberal, page 525
- Business administration, page 527
- Cardiovascular perfusion technology, page 524
- Child Abuse Prevention Studies (CAPS), page 524
- Civil engineering, page 534
- Computer science, page 531

- Counseling, alcohol and drug education (ADCEP) page 523
- Credit and financial management, page 529
- Electrical engineering, pages 534, 535
- Engineering, pages 531-536
- Financial management, page 529
- Industrial engineering, page 535
- Industrial relations, page 530
- Liberal arts, page 525
- Mechanical engineering, page 536
- Ophthalmology technician certificate, page 526
- Science and quantitative methods, page 525
- Science, engineering and, page 532
- Solid waste management, page 530
- Undergraduate Development Certificates in
  - Accounting, page 526
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  - Computer science, page 531
  - Engineering and science, page 532
  - Civil engineering, page 534
  - Electrical engineering, page 534
  - Industrial engineering, page 535
  - Mechanical engineering, page 536

### Alcohol and Drug Counseling Education (ADCEP) certificate (51 credits)

Courses for this program are offered through Continuing Education and Extension/University College in cooperation with the Department of Family Social Science, College of Human Ecology. Requirements for the certificate include completion of 10 courses, plus 1000 hours of supervised internship. In addition, a two-quarter commitment is required of all interns to participate in Personal Growth, Ethics, and Counseling Supervision. Students may apply earned credits toward a baccalaureate degree through the Inter-College Program or through the College of Human Ecology, Department of Family Social Science. In addition, qualified students may apply earned graduate credits toward an M.Ed. degree and possibly toward other master's or doctoral degrees.

The 10 content/clinical courses are designed to prepare individuals to work with clients experiencing a range of problems associated with chemical use/abuse. While planned specifically for persons interested in careers in the field of alcohol and drug use problems, the content courses are also offered as continuing education for educators, clergy, nurses, social workers, psychologists, and other professional persons.

The supervised internship is provided for interns who have successfully completed the content/clinical courses. Students may specialize in one of four

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tracks for the internship: prevention, assessment, primary care, and aftercare. Individual internship placement is made on the basis of an evaluation of the student's previous experience and relevance to the student's vocational goals. Successful completion of the internship leads to the certificate.

### Requirements

FSoS 3026 Assessment of Alcohol and Drug Abuse Problems

FSoS 3027 Current Issues and Pharmacology of Alcohol and Drug Abuse

FSoS 3028 Treatment of Alcohol and Drug Use Problems

FSoS 3029 Counseling Skills Practicum I

FSoS 3030 Counseling Skills Practicum II

FSoS 3031 Counseling Skills Practicum III

FSoS 3032 Chemical Abuse and Families: An Overview

FSoS 3035 Clinical Internship in Chemical Use Problems

FSoS 3037 Group Therapy: Theory and Practice Plus an elective course (3000- or 5000-level for 3 credits)

Any of the above courses may be taken for either undergraduate or graduate credit. No credits may be transferred to this program from other institutions, except for possible experience substitution on the internship.

Persons wishing to apply for admission to the program should write to Dr. Philip Colgan, Alcohol and Drug Counseling Education Program, Department of Family Social Science, 388 McNeal Hall, 1985 Buford Ave., University of Minnesota, St. Paul, MN 55108; telephone 625-3778 (FAX 625-4227). **Applications are accepted on a continuing basis.**

### Behavior Analyst in Community Environments certificate (30-33 credits)

A moratorium has been placed on further admissions to this certificate. Contact an adviser in CEE Counseling, (612) 625-2500 for more information.

### Cardiovascular Perfusion Technology certificate (Garamella, Lynch, Jensen-CRC-Perfusion Training Program) (50 credits)

The Cardiovascular Perfusion Technology Certificate program has been developed by the University of Minnesota Heart and Lung Institute in cooperation with Continuing Education and Extension/University College and the Cardiac Research Committee (CRC). The CRC is a private, nonprofit Minnesota corporation engaged in cardiac surgery and research with a 20-year history in perfusion education.

This program is designed to prepare individuals to become an integral part of a cardiac surgical team as a clinical perfusionist. The responsibilities of the perfusionist include set-up and operation of the heart-lung bypass machine and related instrumentation, including cardiac assist devices. The perfusionist is a skilled practitioner, knowledgeable in the areas of human patho-physiology, pharmacology, hematology, and instrumentation.

The next 18-month course begins in January 1997. Students receive didactic, laboratory, and clinical training. Along with the University Hospital, clinical affiliation exists with eight metropolitan area hospitals and cardiac surgery teams for clinical training. The program is accredited by the Commission on Accreditation of Allied Health Education Programs. Graduates from the program will receive Certificates from Continuing Education and Extension/University College and are eligible for the national Board examination available through the American Board of Cardiovascular Perfusion.

**Prerequisite:** A bachelor's degree, master's degree, or equivalent from an accredited college. Preferred majors: health science degrees, nursing, respiratory care, human biology. Preference will be given to applicants with practical experience in critical care, perfusion assistance, patient monitoring, and cardiovascular research. Specific prerequisites required: human anatomy and physiology, chemistry, physics, mathematics. Grade-point average of 2.75. Factors such as experience and current professional responsibilities also will be considered in admitting students to this program.

### Admissions procedures

Applications are available from the Perfusion Training Program, University of Minnesota Heart and Lung Institute, 425 East River Road, Minneapolis, MN 55455. Telephone (612) 626-2393 or 625-7168. Application period is from July 1 to August 31, 1996. Final review of applications will be made by a selection committee of the program; interviews with the final applicants may be requested. Admission to the program is limited to six people.

### Child Abuse Prevention Studies certificate (18 credits)

The School of Social Work and Continuing Education and Extension/University College are pleased to offer a post-baccalaureate certificate program in Child Abuse Prevention Studies (CAPS).

The purpose of the CAPS program is to provide learning opportunities for professionals and post-baccalaureate students who wish to increase their knowledge and skill in the area of child abuse and neglect prevention. Coursework for the certificate

begins in the fall and runs for six quarters (two academic years). The program requirements for the CAPS certificate include three core courses (9 credits), two electives (6 credits), and an integrative proseminar (3 credits).

The only requirement for admission into the CAPS certificate program is successful completion of the prerequisite course, SW 5301.

Coursework is presented at the graduate level, but may be taken for graduate or undergraduate credit. Students will register for one course requirement of the program each quarter. The three core courses are planned to meet one night each week. Please refer to the Social Work department in the credit offerings section of this bulletin for descriptions of the three core courses.

Graduate-level students may register for the core course sequence without being admitted to the CAPS certificate program. A Child Protection Certificate is being developed for Fall 1996; SW 5301 is also a prerequisite course for this certificate program.

**Requirements:**

- SW 5301 Child Abuse Prevention I (Research and Theory)
- SW 5302 Child Abuse Prevention II (Program Development, Implementation, and Evaluation)
- SW 5303 Child Abuse Prevention III (Strategies for Policy and Systems Change)
- SW 5601 Ethno-Cultural Concepts in Social Work Practice (recommended elective)
- 5000-level elective

**Required proseminar**

For further information and application materials, please contact the CAPS Certificate Adviser, Continuing Education and Extension/University College Counseling, 314 Nolte Center, 315 Pillsbury Drive SE, Minneapolis, MN 55455-0197; (612) 625-2500.

**Certificate Programs in Pharmacy Practice**

Continuing Education and Extension/University College offers certificate programs for registered pharmacists. For more information, contact Continuing Education in Pharmacy at (612) 624-2442.

**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 one 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. A minimum of 50 percent of all course work

(23 credits) must be taken on the A-F grading system. Students transferring credits to this program from other accredited institutions must take a minimum of 12 credits at the University of Minnesota.

**English Requirement** (4-8 credits): Comp 1011, Writing Practice or equivalent

**Core Requirement** (32 credits): 8 credits in each of the following groups:

- Group A, Language, Logic, Mathematics, and the Study of Argument
- Group B, Physical and Biological Universe
- Group C, Individual and Society
- Group D, Literary and Artistic Expression

**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 (612) 625-2500 for a copy of CLA courses meeting the liberal education requirements offered through Extension before taking any courses. If you are pursuing a liberal arts degree concurrently, it is important that you obtain regular advising to assure that the courses you choose for the certificate will also apply toward your degree.

**Science and Quantitative Methods certificate (IS) (45 credits)**

This certificate is designed to provide students with a basic foundation of knowledge in sciences and quantitative methods. Through careful course selection, this certificate can be adapted to suit the needs of students seeking a variety of majors. It is particularly appropriate for those wishing to pursue advanced study in health, agricultural, or general sciences or for students who may, for personal or professional reasons, wish to enhance their quantitative skills. All courses carry college credit and are applicable to a baccalaureate degree in CLA, CBS, Agricultural/Food/Environmental Sciences, and all of the pre-health science areas at the University of Minnesota. This certificate may also address the needs of students already holding baccalaureate degrees but lacking the necessary science component for admission to Medical School, the Ophthalmology Technician Certificate, or the Cardiovascular Perfusion Technology Certificate.

A minimum of 50 percent of all course work must be taken on the A-F grading system. Students transferring credits to this program from other accredited institutions must take a minimum of 12 credits at the University of Minnesota. Early planning with a CEE adviser is strongly encouraged to assure that coursework will satisfy requirements for completion of the program.

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### **Core requirements** (21-25 credits)

Comp 1011

Natural and Physical Sciences (8-10 credits)

Quantitative Methods (8-10 credits)

**Electives:** Additional courses to make a minimum of 45 credits, selected from the following areas:

Astronomy

Biology

Biochemistry

Biostatistics

Cell Biology and Neuroanatomy

Chemistry

Composition\*

Ecology, Evolution, and Behavior

Food Science and Nutrition

Genetics and Cell Biology

Geology and Geophysics

Health Science Unit courses

History of Medicine

History of Science

Information and Decision Sciences

Kinesiology

Logic

Mathematics

Medical Terminology courses

Microbiology

Operations Management Sciences

Physics

Physiology

Plant Biology

Psychology\*

Public Health\*

Rhetoric\*(courses in technical writing and speech only)

Scientific Reasoning

Speech\*

Statistics (and Social Science statistics courses)

Veterinary Pathobiology

\*Courses from these departments may be applied to the certificate but must be pre-approved by your certificate adviser.

Additional science courses which apply toward a degree plan may also be acceptable (consult with an adviser, 625-2500).

### **Ophthalmology Technician certificate**

The Ophthalmology Technician certificate was planned by the Department of Ophthalmology at the University of Minnesota and Continuing Education and Extension/University College. The objective of the certificate program is to provide individuals with technical and mechanical skills and knowledge required in the treatment and diagnosis of eye

diseases so that they may qualify for employment under the supervision of ophthalmologists as ophthalmic medical technicians.

Currently, employment opportunities are excellent throughout the United States. Starting salaries compare favorably with baccalaureate-level health care professionals.

The 21-month program begins each September. Requirements for the certificate will include completion of nine months of didactic and clinical training immediately followed by a 12-month, full-time externship. Along with St. Paul-Ramsey Medical Center, clinical affiliation exists with 10 metropolitan area clinics and hospitals for clinical training. The program is accredited by the Committee for Allied Health Education & Accreditation of the American Medical Association. Graduates from the program will be eligible to take the national certification examination available through the Joint Commission on Allied Health Personnel in Ophthalmology.

**Admissions procedures**—Applications are available from the School of Ophthalmic Medical Technology, St. Paul-Ramsey Medical Center, 640 Jackson Street, St. Paul, MN 55101; (612) 221-3000. The application period is from January 1 to April 15 each year. Preference will be given to applicants who have completed an associate's degree, or equivalent, in an accredited college. Final review of applications will be made by a selection committee of the program. Interviews are required of all applicants. Admission is limited to six students.

### **Undergraduate Development Certificates in Accounting**

The accounting certificates can be 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 business people who wish to have a basic understanding of the elementary principles of accounting and corporation finance. The Level II certificate provides a background for additional study in preparation for the Certified Public Accountant and Certified Management Accountant examinations. In most cases, students who work toward the certificate have already completed a bachelor's degree. Students who do not have a bachelor's degree should consider the accounting program in the Bachelor of Science in Business degree as a preferable alternative.

Students planning to take either the CPA or CMA exams should contact the following organizations for information about requirements needed to take the exams. CPA: Minnesota State Board of Accountancy, (612) 296-7937. CMA: Institute of

Certified Management Accountants, 1-800-638-4427.

**Requirements for the Undergraduate Development Certificates in Accounting**

Students must have completed the equivalent of a minimum of 90 (quarter) college credits with a minimum of a B- grade average. Students who have completed a bachelor's degree will be individually reviewed with particular emphasis on the most recent course work.

**Note:** Upper division management courses (i.e., 3000- and 5000-level) in CEE/UC are taught with the expectation that, in addition to having completed all pre-management course work, students will have either earned a B- grade average in 90 credits of college-level work, or they will have already completed a bachelor's degree.

**Level I (60-64 credits)**

Students transferring credits to this program from other accredited institutions must take a minimum of 16 credits in accounting courses at the University of Minnesota, Twin Cities campus.

**Core Requirements**

- Comp 1011, Writing Practice I or equivalent
- Comp 3022, Critical Reading and Writing for Management
- Econ 1101-1102, Principles of Macro and Microeconomics
- Math 1111, College Algebra and Analytic Geometry
- Math 1142, Short Calculus or Math 1251, Calculus I
- Acct 1050, Introduction to Financial Reporting
- Acct 3001, Introduction to Management Accounting
- Acct 3101, Intermediate Financial Reporting
- Acct 5102, Advanced Financial Reporting I
- Acct 3201, Intermediate Management Accounting
- IDSc 1010, Fundamentals of Information Development and Use
- OMS 1020, Data Analysis and Statistical Inference for Managers
- IDSc 3030, Information Systems and Information Management

**Note:** Students who are contemplating continuing toward a degree from the Carlson School of Management should consult with a Carlson School adviser at 624-3313 before they begin working toward the Level II Accounting Certificate.

**Level II (88-92 credits)**

Students transferring credits to this program from other accredited institutions must take a minimum

of 24 credits in accounting courses at the University of Minnesota, Twin Cities campus.

**Core Requirements (72-80 credits)**

- Comp 1011, Writing Practice I or equivalent
  - Comp 3022, Critical Reading and Writing for Management
  - Econ 1101-1102, Principles of Macro and Microeconomics
  - IR 3002, Personnel and Industrial Relations
  - Math 1111, College Algebra and Analytic Geometry
  - Math 1142, Short Calculus or Math 1251, Calculus I
  - Acct 1050, Introduction to Financial Reporting
  - Acct 3101, Intermediate Financial Reporting
  - Acct 5102, Advanced Financial Reporting I
  - Acct 3001, Introduction to Management Accounting
  - Acct 3201, Intermediate Management Accounting
  - IDSc 1010, Fundamentals of Information Development and Use
  - OMS 1020, Data Analysis and Statistical Inference for Managers
  - IDSc 3030, Information Systems and Information Management
  - Accounting Elective (12 credits): 12 credits of 3000- and 5000-level accounting electives
- Electives (12 -13 credits)**
- BFin 3000, Finance Fundamentals
  - BLaw 3058, Introduction to Law, the Law of Contracts, and Sales Contracts
  - BGS 3002, Business and Society
  - BGS 3004, International Business
  - Econ 3105, Managerial Economics
  - Ins 5100, Risk Management and Insurance
  - LM 3000 Introduction to Logistics Management
  - Mktg 3000, Principles of Marketing
  - Mgmt 3001, Fundamentals of Management
  - Mgmt 3004, Business Policy: Strategy Formulation and Implementation
  - OMS 3000, Introduction to Operations Management

**Undergraduate Development Certificates in Business Administration**

These certificate programs have been approved by the Carlson School of Management and arranged under the supervision of members of the faculties concerned. They are designed to present integrated, high quality, university-level courses of study of shorter length and scope than the full four-year degree programs. They are designed especially for students who wish to obtain a general grounding in the basic principles and theories of business admin-

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istration and for those who want training or an opportunity for advancement in some specific field of business. Applicants must have a B- grade-point average and 90 completed quarter credits to apply to either the Level I or Level II certificates. Students admitted to business certificates usually are working toward an eventual business degree or have already completed a bachelor's degree in another area.

It is possible for a student to move from a course of study for a certificate into a planned program leading to a business degree. Anyone who contemplates such a long-range objective should consult a CEE adviser before proceeding further so as to avoid any loss of credits or possible future rejection from the degree program.

**Note**—Upper division management courses (i.e., 3000- or 5000-level) in CEE/UC are taught with the expectation that, in addition to having completed all pre-management course work, students will have either earned a B- grade average. Students who have completed a bachelor's degree will be individually reviewed with particular emphasis on the final 90 quarter credits.

### **Level I (49-52 credits)**

This certificate, requiring the satisfactory completion of 49-52 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 Level I Certificate are automatically credited toward a Level II Certificate and represent half of its required work load.

All courses must be taken on the A-F grading system. Students transferring credits to this program from other accredited institutions must take a minimum of 12 credits of business courses from the core requirement at the University of Minnesota.

### **Pre-management Requirement (37-40 credits)**

Comp 1011, Writing Practice or equivalent  
Econ 1101-1102, Principles of Economics  
IDSc 1010, Fundamentals of Information Development and Use  
OMS 1020, Data Analysis and Statistical Inference for Managers  
Acct 1050, Introduction to Financial Reporting  
Math 1111, College Algebra and Analytic Geometry  
Psy 1001, General Psychology

### **Core Requirement (12-13 credits)**

Acct 3001, Introduction to Management Accounting  
Econ 3105, Managerial Economics  
BGS 3002, Business and Society

BGS 3004, International Business  
IDSc 3030, Information Systems and Information Management  
IR 3002, Personnel and Industrial Relations  
Ins 5100, Risk Management and Insurance  
BFin 0001C Introduction to Investments (certificate credit—does not apply toward a degree program)  
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 Short Calculus or Math 1251 Calculus Differential

**Note:** Students who are contemplating continuing toward a degree from the Carlson School of Management should consult with a CEE adviser (625-2500) before they begin working toward the Level II Business Administration certificate.

### **Level II (90 credits)**

The Level II Business Administration certificate is a continuation of the Level I certificate, expanding the pre-management and core requirement to provide a broader base of general knowledge and an opportunity for specialization. The completion of the certificate requirement of 90 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.

Only non-business electives may be taken on the S-N grading system. Students transferring credits to this program from other accredited institutions must take a minimum of 24 credits of business courses (not including the pre-management requirement) at the University of Minnesota.

### **Pre-management Requirement (42-45 credits)**

Comp 1011, Writing Practice or equivalent  
Econ 1101-1102, Principles of Economics  
Acct 1050, Introduction to Financial Reporting  
IDSc 1010, Fundamentals of Information Development and Use  
OMS 1020, Data Analysis and Statistical Inference for Managers  
Math 1111, College Algebra and Analytic Geometry  
Math 1142, Short Calculus or Math 1251, Differential Calculus  
Psy 1001, General Psychology



**Core Requirement (24 -25 credits)**

- Acct 3001, Introduction to Management Accounting
- Econ 3105, Managerial Economics
- OMS 3000, Introduction to Operations Management
- IDSc 3030, Information Systems and Information Management
- BFin 3000, Finance Fundamentals
- BGS 3002, Business and Society
- BGS 3004, International Business
- Mktg 3000, Principles of Marketing
- BLaw 3058, Business Law
- IR 3002, Personnel and Industrial Relations
- Ins 5100, Risk Management and Insurance
- LM 3000, Introduction to Logistics Management
- Mgmt 3001, Fundamentals of Management
- Mgmt 3004, Business Policy: Strategy Formulation and Implementation

**Electives in the Carlson School of Management:**

At least 16 additional upper division 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, individual and society, and artistic expression to make a minimum of 90 credits for the certificate.

**Credit and Financial Management certificate (63-66 credits)**

The Credit and Financial Management certificate program was developed cooperatively by Continuing Education and Extension/University College, the Carlson School of Management of the University of Minnesota, and the National Association of Credit Management. The program is directed to students seeking careers in trade credit management, commercial bank and finance company loan management, and senior executive positions in financial management.

Specialized training and skills are necessary in the administration of accounts receivable in today's business. Analyzing lines of credit requires familiarity with all financial and marketing aspects of the customer's business. Credit managers must also be able to communicate and work with top management in their companies toward the integration of sales and financial goals, and thus are in a unique position to advance to senior management positions.

All courses must be taken on the A-F grading system. Students transferring credits to this program from other accredited institutions must take a

minimum of 16 credits at the University of Minnesota.

For more information about working toward the certificate program, contact CEE/UC Counseling, (612) 625-2500.

Not all of the courses required for the three levels of National Association of Credit Management (NACM) certification are available at the University of Minnesota. These additional courses required by the NACM are available by correspondence from the NACM at local community colleges. Please contact the NACM at (612) 341-9624 for specific information about obtaining these additional non-University classes to obtain NACM certification.

**Note**—Upper division management courses (i.e., 3000- or 5000-level) in CEE/UC are taught with the expectation that, in addition to having completed all pre-management course work, students will have either earned a B- grade average in 90 credits of college-level work, or they will have already completed a bachelor's degree.

**Admission to the Credit and Financial Management certificate**

To be considered for admission, students must have completed the equivalent of a minimum of 90 (quarter) college credits with a minimum of a B- grade average. Students who have completed a bachelor's degree will be individually reviewed with particular emphasis on the final 90 quarter credits.

**Core Requirement (55-58 credits)**

(**Note**—Credit and Financial Management Certificate students should take BLaw 3078 and 3088 as soon as possible. These courses are currently under review for continuance.)

- Acct 1050, Introduction to Financial Reporting
- Acct 3001, Introduction to Management Accounting
- Acct 3101, Intermediate Financial Reporting
- BLaw 3058-3078, 3088, Business Law
- Econ 1101-1102, Principles of Economics
- IR 3002, Personnel and Industrial Relations
- Mgmt 3002, Psychology in Management
- Mktg 3000, Principles of Marketing
- Comp 1011, Writing Practice
- Spch 1101, Fundamentals of Speech-Communication: Oral Communication
- BFin 3000, Finance Fundamentals

**Electives**

- Acct 3201, Intermediate Management Accounting
- Econ 3701, Money and Banking
- GC 1275 (formerly GC 3732), Consumer Transactions and the Law

## General Information

BFin 3100, Financial Management  
BFin 3601, Financial Management of Depository Institutions (*offered infrequently*)  
Ins 5100, Risk Management and Insurance  
Mgmt 3001, Fundamentals of Management  
LM 3000, Introduction to Logistics Management

### **Industrial Relations certificate (45 credits)**

This program of study is arranged and coordinated by the Industrial Relations Center of the Carlson School of Management. 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 day and evening M.A. programs and Ph.D. program. See the *Graduate School Bulletin*.

**Caution**—Courses at the 3000 level are taught primarily for juniors and seniors. Courses taught at the 5000 level are taught primarily for juniors, seniors, and graduate-level students.

Students may use S-N grading in Psy 3801 and in non-business electives up to a maximum of 12 credits in the certificate. Students transferring to this program from other accredited institutions must take a minimum of 12 credits in industrial relations at the University of Minnesota.

**Note**—Upper division management courses (i.e., 3000- or 5000-level) in CEE/UC are taught with the expectation that, in addition to having completed all pre-management course work, students will have either earned a B- grade average in 90 credits of college-level work, or they will have already completed a bachelor's degree.

### **Core Requirement (33 credits)**

Econ 1101-1102, Principles of Economics  
IR 3002, Personnel and Industrial Relations  
IR 3007, Collective Bargaining and Labor Relations  
IR 3010, The Individual in the Organization, *or*  
Psy 5702, Psychology of Individualized Behavior in Organizations  
Psy 1001, General Psychology  
Psy 3801, Introduction to Statistical Methods *or* approved substitute (e.g., OMS 1020)  
Soc 1001, Introduction to Sociology

### **Electives (12 credits)**

Econ 3501 or 5531, Labor Economics  
Econ 5534, Economic Security  
Econ 5561, Wages and Employment  
IR 0001C and 0002C, Supervision I and II (certificate credit—does not apply toward a degree program)

IR 3000, Topics in Industrial Relations  
IR 5000, Topics in Industrial Relations  
IR course (any 3000 or 5000 level IR course)  
IDSc 3002 (formerly MIS 3102), Fundamentals of Management Information Systems  
Mgmt 3001, Fundamental of Management  
Mgmt 3001, Psychology in Management  
Psy 3011, Introduction to the Psychology of Learning  
Psy 3135, Introduction to Individual Differences  
Psy 3201, Introduction to Social Psychology  
Psy 5501, Vocational Psychology  
Psy 5701, Personnel and Industrial Psychology  
Psy 5701, Personnel and Industrial Psychology  
Psy 5703, Psychology of Organizational Training and Development  
Psy 5705, Work Motivation  
OMS 5160, Deterministic Modeling and Optimization  
Soc 5201, Introduction to Social Psychology  
Soc 5411, Formal Organizations

### **Solid Waste Management Certificate (24 credits)**

The Solid Waste Management Certificate is an interdisciplinary, practitioner-oriented 24-credit program designed for professionals in the field of solid waste management and related environmental fields whose positions require them to be spokespeople, policy makers, administrators, and managers. The courses are also of interest to graduate students and advanced undergraduates students in related fields such as Public Health, Civil Engineering, Management, Public Affairs, and others.

Courses are taught at the graduate level by both University of Minnesota faculty members and adjunct faculty from the professional field and are a combination of existing University courses as well as new courses created specifically for the program. The courses are offered on a schedule to accommodate the needs of working professionals, on evenings, weekends, and in short-course formats.

The program is intended for students who have completed a bachelor's degree. However, students who have some college work and significant work experience in waste management may be admitted at the discretion of the admissions committee. One college-level science course is required for admission, but no specific academic discipline background is required. Individual certificate courses are open to non-certificate students who meet the course prerequisites.

For more information and application materials, please contact the Solid Waste Management Cer-

tificate coordinator, Department of Counseling, 314 Nolte Center, 315 Pillsbury Drive S.E., Minneapolis, MN 55455-0197; (612) 625-2500; e-mail via internet is tpetek@mail.cee.umn.edu.

**Required Introductory Course** (4 credits)  
Soil 5600 Principles of Waste Management  
(offered fall 1995)

**Core Courses** (6 credits)  
Applied Economics of Solid Waste  
Regulatory and Legal Framework of Waste Management  
Solid Waste Policy and Administration

**Electives** (12 credits)  
(Representative listing; not all courses are available every year)

Introduction to Hazardous Waste Management  
Garbage, Government, and the Globe  
Solid and Hazardous Waste Management  
Solid and Hazardous Waste Processing  
General Environmental Toxicology  
Air Pollution Control  
Advanced Environmental Geology  
Environmental Law  
Environmental Law for Engineers  
Law and Urban Affairs  
Politics of the Regulatory Process  
Environmental Policy  
Resource and Environmental Economics  
Economics of Natural Resource Policy  
Managerial Communications  
Communication in Technology/Environmental Impact Assessment  
Business and the Natural Environment  
Topics in Business, Government, Society  
External Affairs Management

**Capstone Experience** (2 credits)  
Directed study paper or project

### **Undergraduate Development Certificates 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 technical colleges have the responsibility of training the skilled worker.

The Department of Extension Classes of Continuing Education and Extension/University College offers a variety of certificates for the part-time student who has the ability to carry college-level courses leading to a career at the engineer or 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 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. Students interested in working toward a certificate should contact an adviser in the CEE/UC Counseling Office, telephone 625-2500, as soon as possible. However, application for admission to the certificate programs should not be made until students have completed 12 applicable credits.

### **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 nontechnical topics. Students subsequently pursuing degree programs will be required to make up these deficiencies. Potential degree students should make early contact with CEE Counseling and the Department of Computer Science.

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## General Information

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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 accredited institutions must take a minimum of 12 credits in the concentration requirement at the University of Minnesota.

### **Core Requirement** (21-24 credits)

Math 1251, 1252, 1261, Differential Calculus, Integral Calculus, Algebra and Geometry of Euclidian Space (formerly 1211, 1221, 1241)  
Comp 1011, Writing Practice or equivalent  
CSci 3311, Discrete Structures of Computer Science

### **Concentration Requirement** (16-20 credits)

CSci 3316 The Structure of Computer Programming I; and CSci 3317 The Structure of Computer Programming II  
CSci 3321 and CSci 3322, Algorithms and Data Structures I and II  
CSci 3327 Introduction to the Organization of Computer Systems

**Electives**—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 (see the current I.T. bulletin). Students entering fall 1994 and later should choose these electives from the campus-wide liberal education requirements.

### **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 to plan the concentration and technical requirements. Students transferring credits to this program from

other accredited institutions must take a minimum of 24 credits at the University of Minnesota, not including those taken for the UDC in Computer Science—45 credits. Elective credits may not be used to satisfy this residency requirement.

**Prerequisite:** Completion of the UDC in Computer Science—45 credits

### **Core Requirement** (16 credits)

Math 3251 Vector Differential Calculus  
Math 3261 Differential Equations with Linear Algebra  
Stat 3091 Introduction to Probability and Statistics  
CSci 5102 Structure and Programming of Software Systems II

**Concentration Requirement** (12 credits): Any 12 credits in 3000 or 5000 courses in computer science except 3101, 3102, 3104, 3113, and 5113.

**Related Technical Requirement** (8 credits)—Courses chosen in this group should reflect areas in which students see potential application of personal computer science skills. Some examples of related technical areas include health sciences, transportation, and environmental engineering. Course selection should be worked out with an adviser in Computer Science (625-4055) 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 nontechnical electives group requirement (see below) in order to form a coherent, expanded related technical area.

**Electives**—Courses from nontechnical or biological science electives, to make a minimum of 90 credits, including those from the 45 credit UDC in Computer Science.

### **Undergraduate Development Certificate in Engineering and Science**—45 credits

The UDC in Engineering and Science—45 credits is designed to provide students with the fundamentals of mathematics, physics, and broad technical communications skills which will enable them to handle certain engineering support assignments in any engineering field and will give them the necessary background for more specialized or advanced study either as engineers or as engineering technicians. All courses in the UDC in Engineering and Science—45 credits program carry degree credit, representing the first year of required course work for an engineering degree, and are applicable to a baccalaureate degree upon admission to the Institute of Technology.

Refer to the introductory statement about the UDC at the beginning of this section.

Students transferring credits to this program from other accredited institutions must take a minimum of 12 credits from the core requirement at the University of Minnesota.

**Prerequisite:** High school graduate or equivalent; 2 years of algebra and 2 years of geometry, including trigonometry.

**Core Requirements (36 credits)**

- Comp 1011, Writing Practice or equivalent
- Math 1251, Differential Calculus (formerly 1211)
- Math 1252, Integral Calculus (formerly 1221)
- Math 1261, Algebra and Geometry of Euclidean space
- Phys 1251, or 1271/1275, 1252 or 1281/1285, General Physics and Lab
- Chem 1001, or 1051 Chemical Principles I

**Plus two of the following five courses:**

- CSci 3101, A FORTRAN Introduction to Computer Programming
- CSci 3102, A Pascal Introduction to Computer Programming
- Chem 1051 or 1052, Chemical Principles I or II
- CSci 3113, An Introduction to Programming in C
- ME 1025, Engineering Graphics

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

**Undergraduate Development Certificate in Engineering and Science—90 credits**

(Includes 45 credits from Undergraduate Development Certificate in Engineering and Science)

This certificate is designed for students who have an engineering degree objective and who wish to continue working toward one of the engineering curriculums of the Institute of Technology. It will also be of value to technicians who desire to widen and deepen their technical role.

This approach involves interweaving into one expanding pattern the elements of basic science, engineering science, professional engineering work, and design. To build the sound foundation required in engineering work, the first two years of all engineering curriculums emphasize the basic sciences of mathematics, physics, and chemistry.

Work in nontechnical and biological science electives is also required throughout the entire engineering program. This is intended to broaden viewpoints and to add to perspective.

All classes in the UDC in Engineering and Science—90 credits carry degree credit and are trans-

ferable 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 accredited institutions must take a minimum of 24 credits from the core requirement or spread requirement at the University of Minnesota, not including those taken for the UDC in Engineering and Science—45 Credits.

**Prerequisite:** Completion of the UDC in Engineering and Science—45 credits.

**Core Requirements (20-24 credits)**

- Math 3251 or 3311, Vector Differential Calculus
- Math 3261 or 3321, Differential Equations with Linear Algebra
- AEM 1015, Statics
- Phys 1253 or 1291/1295, General Physics and Laboratory
- Chem 1051 or 1052, Chemical Principles I or II

**Spread Requirement**—A minimum of 8 credits from the following courses

- Math 3262 or 3331, Sequences, Series, and Approximation
- AEM 3016, Deformable Body Mechanics
- AEM 3036, Dynamics
- EE 3009, Linear Circuits I
- EE 1400, Circuits Laboratory
- CE 3400, Fluid Mechanics
- Chem 1051 or 1052 (if not used previously), Chemical Principles I or II
- Phys 1254 or 3501, Physics
- Stat 3091, Probability and Statistics or ME 3900, Introduction to Engineering Statistics

**Electives**—Courses from nontechnical or biological science electives, or mathematics or chemistry or Comp 3031 or physics or Comp 3085 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 the current I.T. bulletin). Students entering fall 1994 and later should choose these electives from the campus-wide liberal education requirements.

## General Information

### **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 accredited institutions must take a minimum of 24 credits at the University of Minnesota, not including those taken for the UDC in Engineering and Science—45 credits.

**Prerequisite:** Completion of the UDC in Engineering and Science—45 credits.

**Core Requirements** (25 credits selected from the following)

Math 3251 or 3311, Vector Differential Calculus  
Math 3261 or 3321, Differential Equations with Linear Algebra

Math 3252 or 3331, Multivariable Integral Calculus

Chem 1051-1052 or 1004-1005† or 1031-1032, General Principles of Chemistry

Phys 1253 or 1291/1295, General Physics and Laboratory

AEM 1015 Statics

AEM 3016, Deformable Body Mechanics

CE 3400, Fluid Mechanics

CSci 3101, FORTRAN

CSci 3113, Introduction to Programming in C

CSci 3102, Introduction to PASCAL

ME 3301, Thermodynamics

**Concentration Requirement** (20 credits)—Select courses from the list below in the fields desired

CE 3100, Introduction to Surveying and Mapping  
CE 3200, Introduction to Transportation Engineering

CE 3300, Soil Mechanics

CE 3400, Fluid Mechanics (if not taken in core requirement)

CE 5405, Hydrology and Hydrologic Design

CE 5603, Introduction to Construction Materials

CE 5401, Water Resources Engineering

CE 5500, Analysis and Design of Water Supply Systems

CE 5501, Analysis and Design of Wastewater Systems

CE 5703, Project Management

### **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 courses normally required in electrical 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 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 accredited institutions must take a minimum of 24 credits in the core requirement at the University of Minnesota, not 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 3251 or 3311, Vector Differential Calculus

Math 3261 or 3321, Differential Equations with Linear Algebra

Math 3221, Introduction to Linear Algebra and Linear Differential Equations

Math 3252 or 3331, Multivariable Integral Calculus

EE 1400, Circuits Laboratory

EE 3009, Linear Circuits I

EE 3010, Linear Circuits II

Phys 1253/1254 or 3501, General Physics and Laboratory

Third-Year Electrical Engineering courses (3000-5000 level)

**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. 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. Students pursuing an I.T. degree should choose liberal education requirements as described in the Institute of Technology bulletin (request by calling 625-2008).

**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 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 accredited institutions must take a minimum of 36 credits at the University of Minnesota, not 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 3011, Signal Analysis
- EE 3012, System Design
- EE 3060, Semiconductor Devices
- EE 3061, Analog Electronics
- EE 3062, Digital Electronics
- EE 3110, Electric and Magnetic Fields
- EE 3111, Electromagnetic Waves
- EE 3351, Introduction to Logic Design and Microprocessors
- EE 3352, Microprocessors
- EE 3400-3401-3402, Junior Electrical Engineering Laboratory
- Comp 3031, Technical Writing for Engineers

Any other EE 5000-level courses

**NOTE**—The Bachelor of Electrical Engineering degree is now available by distance education. See the I.T. degree information on page xxx.

**Electives**—Courses from nontechnical (maximum 6 credits) or technical electives (including fourth-year courses in electrical engineering) to make a minimum of 135 credits for the certificate. 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 the current I.T. bulletin). Students pursuing an I.T. degree should choose liberal education requirements as described in the Institute of Technology bulletin (request by calling 625-2008).

**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 accredited institutions must take a minimum of 24 credits at the University of Minnesota, not including those taken for the UDC in Engineering and Science—45 credits. **Prerequisite:** Completion of the UDC in Engineering and Science—45 credits.

**Prerequisite:** Completion of the UDC in Engineering and Science—45 credits

**Core Requirements** (25-29 credits)

- CSci 3101, A FORTRAN Introduction to Computer Programming
- Math 3261, Differential Equations with Linear Algebra
- Math 3251, Vector Differential Calculus
- Math 3321 may be substituted for 3261 and 3251*
- Stat 3091, Probability and Statistics or
- ME 3900, Introduction to Engineering Statistics

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## General Information

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IEOR 3000, (formerly IEOR 5000) Introduction to Industrial Engineering Analysis  
Comp 3031, Technical Writing for Engineers  
Phys 1253 or 1291/1295, General Physics and Laboratory

**Concentration Requirements** (19 credits): Select at least four courses from those listed below:

IEOR 5010, Introduction to Work Analysis  
IEOR 5020, Engineering Cost Accounting, Analysis and Control  
IEOR 5030, Quality Control and Reliability  
IEOR 5040, Introduction to Operations Research  
IEOR 5050, Engineering Economic Analysis  
Other IEOR courses as they are offered

**Note**—Prerequisites and course overlap between certificate and degree credit courses should be evaluated by an I.T. adviser (624-8504).

### **Undergraduate Development Certificate in Mechanical Engineering—94-99 credits**

(Includes 45 credits from Undergraduate Development Certificate in Engineering and Science)

The Undergraduate Development Certificate in Mechanical Engineering—94-96 credits enables a student to continue the Undergraduate Development Certificate work in courses normally required in mechanical engineering degree programs and establishes the prerequisite work needed to pursue courses at the third-year level. It is designed to help engineering technicians assume a role of increased responsibility in working with mechanical engineers. It also represents a coherent body of study in helping determine whether further work toward a mechanical engineering degree should be pursued. Upon acceptance by the Institute of Technology a student may transfer appropriate work completed in a certificate program to a bachelor's degree program.

Students transferring credits to this program from other accredited institutions must take a minimum of 24 credits at the University of Minnesota, not including those taken for the UDC in Engineering and Science—45 credits.

**Prerequisite:** Completion of the UDC in Engineering and Science—45-48 credits.

#### **Core Requirements** (45 credits)

CSci 3101, A FORTRAN Introduction to Computer Programming  
Math 3261, Differential Equations with Linear Algebra  
Math 3251, Vector Differential Calculus

*Math 3321 may be used in lieu of Math 3261 and 3251*

AEM 1015, Statics  
AEM 3016, Deformable Body Mechanics  
AEM 3036, Dynamics  
Phys 1253 or 1291/1295, General Physics and Laboratory  
ME 3020, Mechanical Engineering Computation  
ME 3201, Mechanical Engineering Systems Analysis  
ME 3203, Analysis of Mechanism Systems or  
ME 3205, Engineering Systems Design  
ME 3301, Thermodynamics  
ME 3303, Applied Thermodynamics or  
ME 5342, Heat Transfer

**Electives**—Additional electives from the following courses to make a minimum of 94-96 credits including credits from UDC in Engineering and Science—45 credits.

ME 3205, Engineering Systems Design (if not used in core requirement)  
ME 5342, Heat Transfer (if not used in core requirement)  
ME 5344, Thermodynamics of Fluid Flow  
ME 3701-3702, Basic Measurement Laboratory I-II  
CE 3400 or AEM 3200, Fluid Mechanics  
IEOR 3000, Introduction to Industrial Engineering Analysis  
ME 3900 or Stat 3091, Statistics

**Note**—ME 1025 Engineering Graphics or accepted equivalent is required if not already taken in the UDC Engineering and Science—45 credits



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# Numbering/Symbols/Maps

## Abbreviations

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### Course numbering

All University courses carry four-digit numbers. The first digit indicates the credit level of the course. See sample below:

|                |  |
|----------------|--|
| 0000C to 0999C | Certificate credit course  |
| 0000 to 0999   | Noncredit course   |
| 1000 to 1999   | Introductory degree-credit course—primarily for freshmen and sophomores  |
| 3000 to 3999   | Intermediate degree-credit course—primarily for juniors and seniors. Also open to other students with at least C averages overall and in all prerequisite work |
| 5000 to 5999   | Advanced degree credit course—primarily for juniors, seniors, and graduate-level students  |
| 8000 to 8999   | Degree credit course open only to students who have been admitted to the University of Minnesota Graduate School   |

To take a course beginning with the numeral 5 (indicating a degree credit course intended primarily for juniors, seniors, and graduate students) or beginning with the numeral 8 (indicating a course intended only for students admitted to the University of Minnesota Graduate School) for graduate credit, see *Graduate Credit*, page 40.

### 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.  |
| ⊙      | A joint day/Extension class open to Extension students and to regularly enrolled day school students.                        |
| †      | All courses listed before this symbol must be completed before credit may be received.                                       |
| §      | No credit is given if credit has been received for equivalent course listed after this symbol.                               |
| ¶      | Concurrent (simultaneous) registration is allowed (or required) in courses listed after this symbol                          |
| #      | Consent of instructor.   |
| (IS)   | Course also available through Department of Independent Study. See page 44.  |
| Δ      | Consent of department offering course is required.   |
| cr     | Credit   |
| Qtr    | Quarter  |
| Spec   | Special Term   |
| S/N    | Satisfactory/No credit grading system. See page 36.  |
| A/F    | Letter grading system. See page 36.  |
| Lect   | Lecture  |
| Rec    | Recitation   |
| Prereq | Prerequisite. See page 35.   |
| Sec    | Section  |
| Equip  | Equivalent   |
| Grad   | Graduate   |

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## Department abbreviations

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### Department abbreviations, course designators

- Acct, *Accounting*  
AdEd, *Adult Education* (Vocational and Technical Education)  
AEM, *Aerospace Engineering and Mechanics*  
Afro, *Afro-American and African Studies*  
AgEc, *Agricultural and Applied Economics*  
AgEn, *Biosystems and Agricultural Engineering*  
AgET, *Agricultural Engineering Technology*  
Agro, *Agronomy and Plant Genetics*  
AmIn, *American Indian Studies*  
AmSt, *American Studies*  
ANE, *Ancient Near Eastern Studies*  
AnSt, *Ancient Studies*  
AnSc, *Animal Science*  
Anth, *Anthropology*  
Arab, *Arabic*  
Arch, *Architecture*  
ArEd, *Art Education* (Curriculum and Instruction)  
ArtH, *Art History*  
ArtS, *Art*  
Ast, *Astronomy*  
BAB, *Bachelor of Applied Studies*  
BIN, *Bachelor of Information Networking*  
BioC, *Biochemistry*  
Biol, *Biology*  
BFin, *Finance*  
BGS, *Business, Government, and Society*  
BLaw, *Business Law*  
BIE, *Business and Industrial Education* (Vocational and Technical Education)  
CAPS, *Clinical and Population Sciences* (College of Veterinary Medicine)  
CBN, *Cell Biology and Neuroanatomy*  
Chem, *Chemistry*  
Chic, *Chicano Studies*  
CAPy, *Child and Adolescent Psychiatry*  
CPsy, *Child Psychology*  
Chn, *Chinese*  
CE, *Civil and Mineral Engineering*  
Clas, *Classical and Near Eastern Studies*  
CLS, *Clinical Laboratory Science*  
CVM, *College of Veterinary Medicine*  
CDis, *Communication Disorders*  
CLit, *Comparative Literature*  
CSDS, *Comparative Studies in Discourse and Society* (Cultural Studies and Comparative Literature)  
CSch, *Compleat Scholar* (noncredit)  
CSW, *Compleat Scholar Weekends* (noncredit)  
Comp, *Composition and Communication*  
CSci, *Computer Science*  
CrSr, *Croatian and Serbian Language*  
CSCL, *Cultural Studies and Comparative Literature*  
CI, *Curriculum and Instruction* (Curriculum and Instruction; includes ArEd, Elem, CISy, SeEd)  
CISy, *Curriculum and Instructional Systems* (Curriculum and Instruction)  
Dnce, *Dance*  
Dan, *Danish*  
Dsgn, *Design* (Design, Housing, and Apparel)  
DHA, *Design, Housing, and Apparel* (includes former Dsgn, Hsg, TexC)  
Dtch, *Dutch*  
EAS, *East Asian Studies*  
EALL, *East Asian Languages and Literature*  
EEB, *Ecology, Evolution, and Behavior*  
Econ, *Economics*  
EdPA, *Educational Policy and Administration* (includes courses formerly in HiEd, SPFE, and EdAd)  
EPsy, *Educational Psychology*  
EE, *Electrical Engineering*  
Elem, *Elementary Education* (Curriculum and Instruction)  
Engl, *English* (language and literature)  
EngW, *English* (creative and professional writing)  
ESL, *English as a Second Language*  
Ent, *Entomology*  
FE, *Family Education* (Vocational and Technical Education)  
FPCH, *Family Practice and Community Health*  
FSoS, *Family Social Science*  
BFin, *Finance* (business)  
Fin, *Finnish*  
FW, *Fisheries and Wildlife*  
FScN, *Food Science and Nutrition*  
FSSP, *Foreign Studies SPAN* (formerly FoSt)  
ForP, *Forest Products*  
FR, *Forest Resources*  
Fren, *French*  
FrIt, *French and Italian*  
GC, *General College*  
GCB, *Genetics and Cell Biology*  
Geog, *Geography*  
Geo, *Geology and Geophysics*  
Ger, *German*  
Gero, *Gerontology*  
Grk, *Greek*

## Department abbreviations

|   |   |
|---|---|
| HSU, <i>Health Science Units</i>  | Nor, <i>Norwegian</i>   |
| Hebr, <i>Hebrew</i>   | Nurs, <i>Nursing</i>  |
| Hndi, <i>Hindi</i>  | OMS, <i>Operations and Management Science</i>                   |
| Hist, <i>History</i>  | Per, <i>Persian</i>   |
| HMed, <i>History of Medicine</i>  | Phcg, <i>Pharmacognosy</i>                                      |
| HSci, <i>History of Science and Technology</i>                              | Phar, <i>Pharmacy Practice</i>                                  |
| HSem, <i>Honors Opportunities (CLA)</i>                                     | Phil, <i>Philosophy</i>   |
| Hort, <i>Horticultural Science</i>  | PE, <i>Physical Education</i>                                   |
| Hsg, <i>Housing (Design, Housing, and Apparel)</i>                          | PMed, <i>Physical Medicine and Rehabilitation</i>               |
| HRD, <i>Human Resource Development (Vocational and Technical Education)</i> | Phys, <i>Physics</i>  |
| Hum, <i>Humanities</i>  | PBio, <i>Plant Biology</i>                                      |
| IEOR, <i>Industrial Engineering/Operations Research</i>                     | PIPa, <i>Plant Pathology</i>                                    |
| IR, <i>Industrial Relations</i>   | Plsh, <i>Polish</i>   |
| CEBS, <i>Certified Employee Benefits Specialist</i>                         | Pol, <i>Political Science</i>                                   |
| IDSc, <i>Information and Decision Sciences</i>                              | Port, <i>Portuguese</i>   |
| IofT, <i>Institute of Technology</i>  | PSch, <i>Practical Scholar (noncredit)</i>                      |
| ID, <i>Interdepartmental Study</i>  | Psy, <i>Psychology</i>  |
| IntR, <i>International Relations</i>  | PA, <i>Public Affairs</i>                                       |
| Ins, <i>Insurance</i>   | PubH, <i>Public Health</i>                                      |
| Ital, <i>Italian</i>  | Rec, <i>Recreation, Park and Leisure Studies</i>                |
| Jpn, <i>Japanese</i>  | RelA, <i>Religions in Antiquity</i>                             |
| JwSt, <i>Jewish Studies</i>   | RelS, <i>Religious Studies</i>                                  |
| Jour, <i>Journalism and Mass Communication</i>                              | REX, <i>Research Explorations (noncredit)</i>                   |
| Kin, <i>Kinesiology</i>   | Rhet, <i>Rhetoric</i>   |
| Kor, <i>Korean</i>  | Russ, <i>Russian</i>  |
| LA, <i>Landscape Architecture</i>   | Scan, <i>Scandinavian</i>                                       |
| LgTT, <i>Language, Teaching, Technology</i>                                 | SeEd, <i>Secondary Education (Curriculum and Instruction)</i>   |
| LAS, <i>Latin American Studies</i>  | Slav, <i>Slavic</i>   |
| Lat, <i>Latin</i>   | SAPh, <i>Social and Administrative Pharmacy</i>                 |
| LASk, <i>Learning and Academic Skills</i>                                   | SW, <i>Social Work</i>  |
| LS, <i>Liberal Studies (Master of Liberal Studies degree)</i>               | Soc, <i>Sociology</i>   |
| Ling, <i>Linguistics</i>  | Soil, <i>Soil, Water, and Climate</i>                           |
| LM, <i>Logistics Management</i>   | SALC, <i>South Asian Languages and Cultures</i>                 |
| Mgmt, <i>Management</i>   | Span, <i>Spanish</i>  |
| Mar, <i>Marathi</i>   | SpPt, <i>Spanish-Portuguese</i>                                 |
| Mktg, <i>Marketing</i>  | Spch, <i>Speech-Communication</i>                               |
| MatS, <i>Materials Science and Engineering</i>                              | Stat, <i>Statistics</i>   |
| Math, <i>Mathematics</i>  | Swed, <i>Swedish</i>  |
| MthE, <i>Mathematics Education</i>  | TexC, <i>Textiles and Clothing (Dsgn, Housing, and Apparel)</i> |
| ME, <i>Mechanical Engineering</i>   | TrIn, <i>Translation and Interpreting</i>                       |
| MeSt, <i>Medieval Studies</i>   | Th, <i>Theatre Arts</i>   |
| MicB, <i>Microbiology</i>   | Turk, <i>Turkish</i>  |
| MELC, <i>Middle Eastern Languages and Cultures</i>                          | UrbS, <i>Urban Studies</i>                                      |
| Mil, <i>Military Science</i>  | CVM, <i>College of Veterinary Medicine</i>                      |
| MdGk, <i>Modern Greek</i>   | VoEd, <i>Vocational Education</i>                               |
| Mus, <i>Music</i>   | WoSt, <i>Women's Studies</i>                                    |
| MuEd, <i>Music Education</i>  | YoSt, <i>Youth Studies</i>                                      |
| Nav, <i>Naval Science</i>   |   |

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## Campus building abbreviations

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### Campus building abbreviations

Campus and parking maps are included in this bulletin following this list. Special maps designed to help students with mobility handicaps get around the Minneapolis and St. Paul campuses are available. Call Disability Services, 624-4037, and ask for the "Guide for Students with Disabilities." The map shows handicapped parking places, building entrance levels, accessible buildings, curb cuts, location of modified rest rooms, and more.

- ABLMS (StP), *Andrew C. Boss Laboratory-Meat Science*  
AgEng(StP), *Agricultural Engineering*  
AkerH, *Akerman Hall*  
ApH, *Appleby Hall*  
AlderH (StP), *Alderman Hall*  
AmundH, *Amundson Hall*  
AndH, *Anderson Hall (West Bank)*  
AnScVM (StP), *Animal Science/Veterinary Medicine*  
Arch, *Architecture*  
Armory, *Armory Bldg.*  
ArtB, *Art Building (2020 Washington Ave. So., Minneapolis, West Bank)*  
BellMus, *Museum of Natural History*  
BFAB, *Bierman Field Athletic Bldg.*  
BioSci(StP), *Biological Sciences Center*  
BlegH, *Blegen Hall*  
BorH (StP), *Borlaug Hall*  
BuH, *Burton Hall*  
Carlson School of Management Conference Center, *Humphrey Center, West Bank*  
CentLib (StP), *Central Library*  
ChDev, *Child Development*  
CookeH, *Cooke Hall (1900 University Ave S.E.)*  
ChRC, *Children's Rehabilitation Center*  
CivE, *Civil Engineering*  
CMU, *Coffman Memorial Union*  
ClaOff (StP), *Classroom Office Bldg.*  
CofH(StP), *Coffey Hall*  
DiehlH, *Diehl Hall*  
EBCEC (StP) *Earle Brown Continuing Education Center*  
Ecology (StP), *Ecology Bldg.*  
EddyH, *Eddy Hall*  
EdHAn, *Eddy Hall Annex*  
EE/CSci, *Electrical Engineering/Computer Science Bldg.*  
ElectE, *Electrical Engineering*  
EltH, *Elliott Hall*  
FergH, *Ferguson Hall (West Bank)*  
FieldHse, *University Field House (1800 University Ave S.E.)*  
FolH, *Folwell Hall*  
FordH, *Ford Hall*  
FraserH, *Fraser Hall*  
FScN(StP), *Food Science and Nutrition*  
GRaptCtr (StP), *Gabbert Raptor Center*  
Golf Club House, *University Golf Course (2275 W. Larpentour Ave., St.P)*  
GorL (StP), *Gortner Laboratory of Biochemistry*  
GrnH (StP), *Green Hall*  
Gym (StP), *Gymnasium (St. Paul campus)*  
HckrH(StP), *Haecker Hall*  
HodsonH (StP), *Hodson Hall*  
HrG(StP), *Horticulture Greenhouse*  
HSUnitF, *Health Sciences Unit F*  
HHHCtr, *Hubert H. Humphrey Center (West Bank)*  
Intermedia Arts (formerly UC Video), *Intermedia Arts (2822 Lyndale Ave. S, Mpls)*  
IHCC, *Inver Hills Community College (8445 College Trail, Inver Grove Heights)*  
JacH, *Jackson Hall*  
JohH, *Johnston Hall*  
JonesH, *Jones Hall*  
KaufL (StP), *Kaufert Lab*  
KlaCt, *Klaeber Court*  
KoltH, *Kolthoff Hall*  
Law, *Law Building (West Bank)*  
LindH, *Lind Hall*  
MacP, *MacPhail Center (1128 LaSalle Ave., Minneapolis)*  
Mayo, *Mayo Memorial Hospital*  
McNH(StP), *McNeal Hall*  
MechE, *Mechanical Engineering*  
Mgmt/Econ, *Management/Economics Bldg. (West Bank)*  
MlrdH, *Millard Hall*  
MMA, *Mayo Memorial Auditorium*  
MoosT, *Moos Tower (formerly HSUnitA)*  
MurH, *Murphy Hall*  
MusEd, *Music Education*  
NCCE, *Nolte Center for Continuing Education*  
NorrisH, *Norris Hall*  
NichH, *Nicholson Hall*  
NMA, *Northrop Memorial Auditorium*  
NHCC, *North Hennepin Community College (7411 85 Ave N, Brooklyn Park)*

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## Campus building abbreviations

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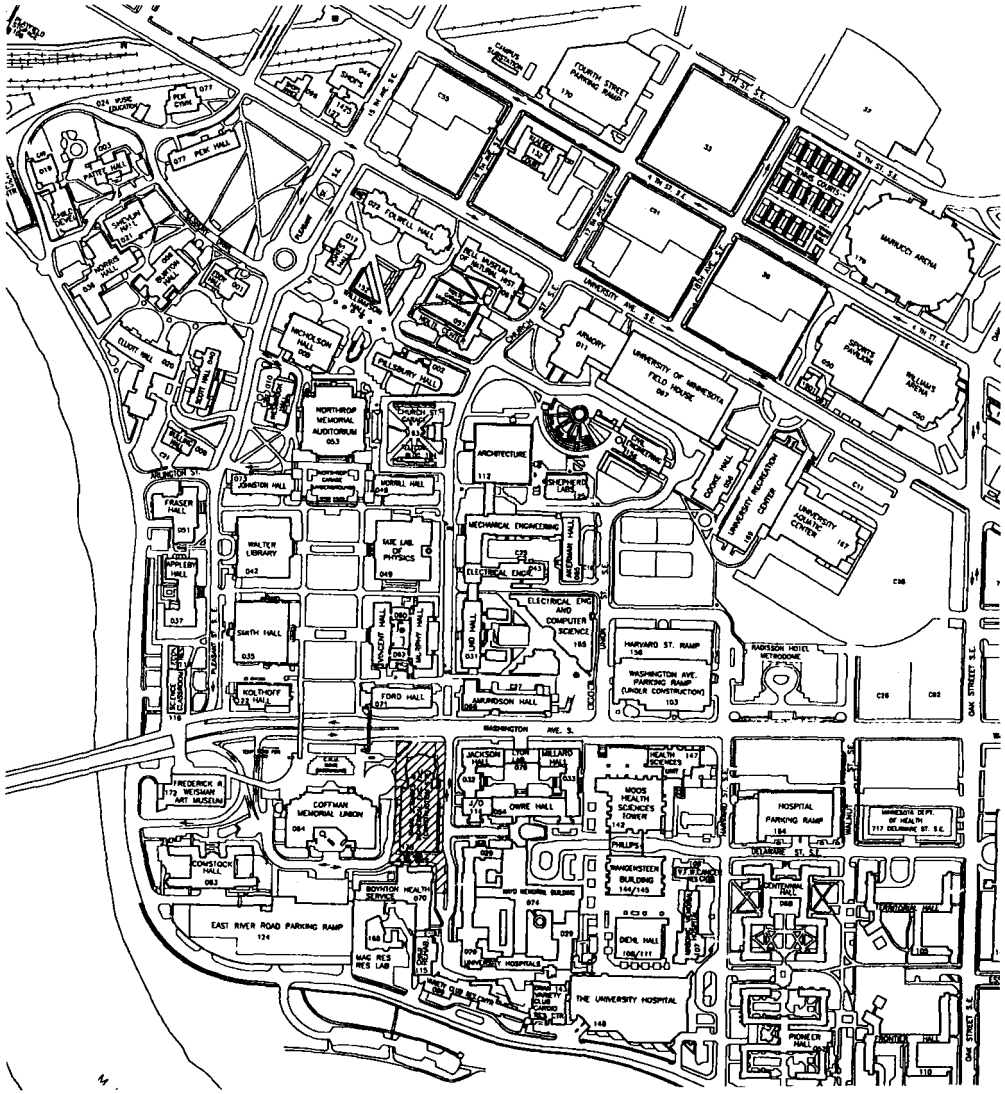
OMWL, *O. Meredith Wilson Library (West Bank)*  
OwreH, *Owre Hall*  
PeikH, *Peik Hall*  
PeikG, *Peik Gymnasium*  
PetH (StP), *Peters Hall*  
Phys, *Physics, Tate Laboratory of*  
PillsH, *Pillsbury Hall*  
PtH, *Pattee Hall*  
PWB, *Phillips Wangensteen Bldg.*  
RarigC, *Rarig Center (West Bank)*  
ScottH, *Scott Hall*  
SciCB, *Science Classroom Bldg.*  
ShevH, *Shevlin Hall*  
SmithH, *Smith Hall*  
SnH (StP), *Snyder Hall*  
Soils (StP), *Soils*  
SocSci, *Social Sciences Bldg. (West Bank)*

StakH(StP), *Stakman Hall of Plant Pathology*  
StCen (StP), *Student Center*  
UAqCtr, *University Aquatic Center (1910  
University Ave S.E.)*  
URecCtr, *University Recreation Center (1906  
University Ave S.E.)*  
U-Tech Bldg, *University Technology Center  
(1313 Fifth St S.E.)*  
VetDL (StP), *Veterinary Diagnostic Labs, 1943  
Carter Ave & 1333 Gortner Ave*  
VinH, *Vincent Hall*  
VoTech (StP), *Vocational-Technical Education*  
WaLib, *Walter Library*  
WeismanArt, *Frederick R. Weisman Art Museum*  
WesH, *Wesbrook Hall*  
WilleyH, *Willey Hall (West Bank)*  
WmsonH, *Williamson Hall*  
WullH, *Wulling Hall*

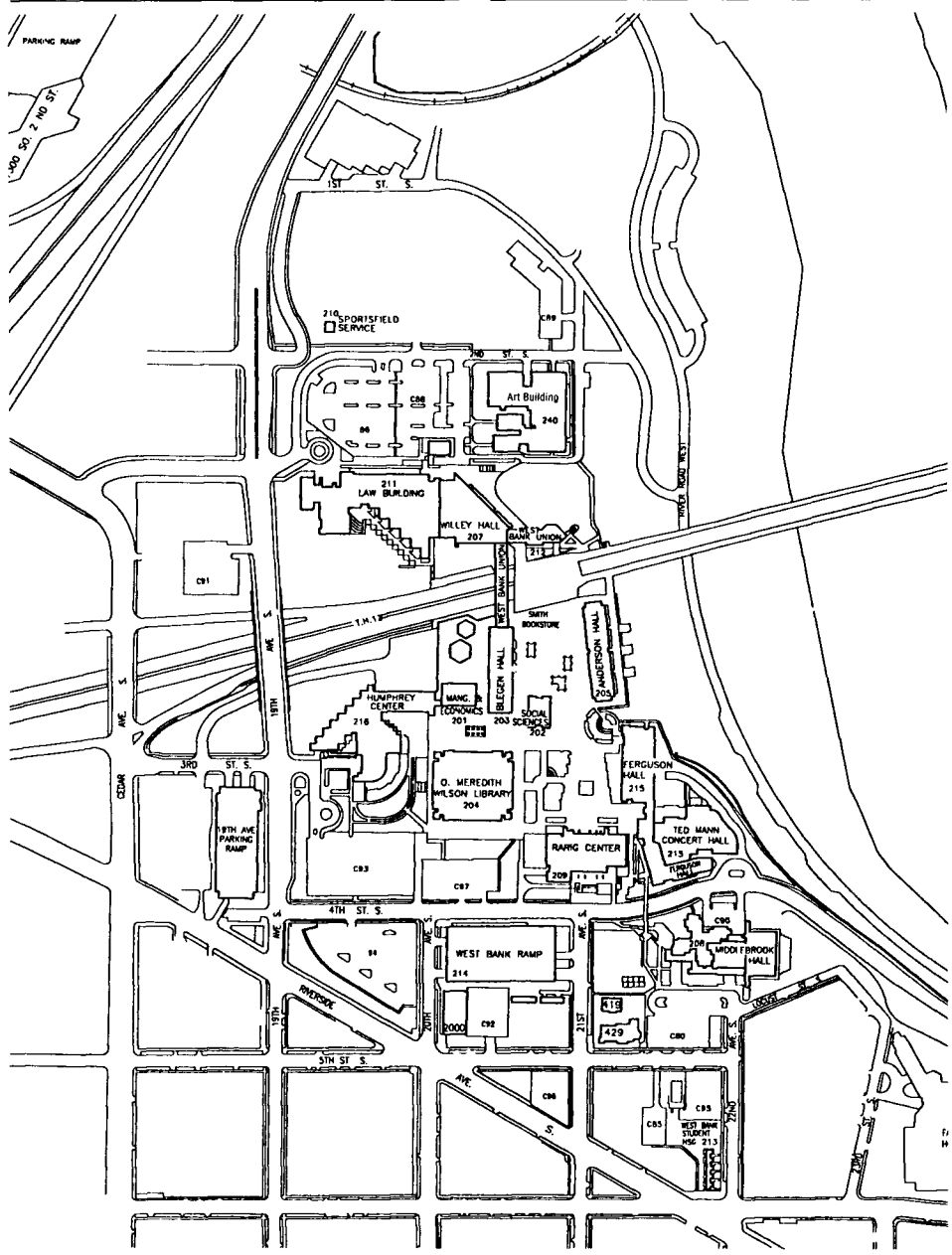
## Abbreviations for off-campus classes

The following abbreviations for off-campus class sites are used throughout this Bulletin:

|                          |   |
|--------------------------|---|
| <b>IHCC</b>              | Inver Hills Community College<br>8445 College Trail, Inver Grove Heights 55076 (telephone 450-8500) |
| <b>NHCC</b>              | North Hennepin Community College<br>7411 85 Ave N, Brooklyn Park 55445 (telephone 493-0555)         |
| <b>Roseville Area HS</b> | Roseville Area High School—West Campus<br>1261 W. Highway 36, Roseville 55113                       |
| <b>Richfield HS</b>      | Richfield Senior High School<br>7001 Harriet Ave. S., Richfield 55423                               |

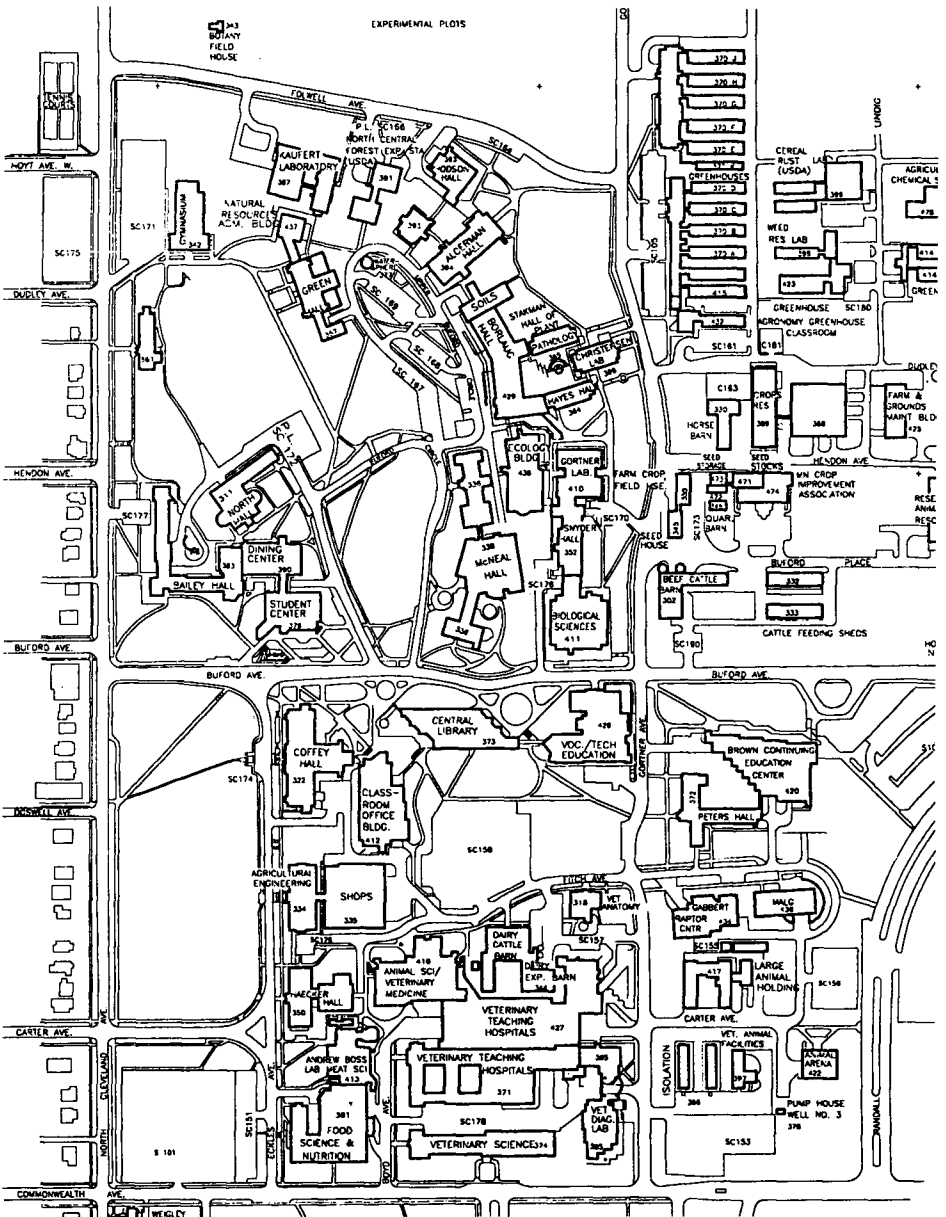


**University of Minnesota  
Twin Cities Campus  
East Bank**



**University of Minnesota  
Twin Cities Campus  
West Bank**

# Maps

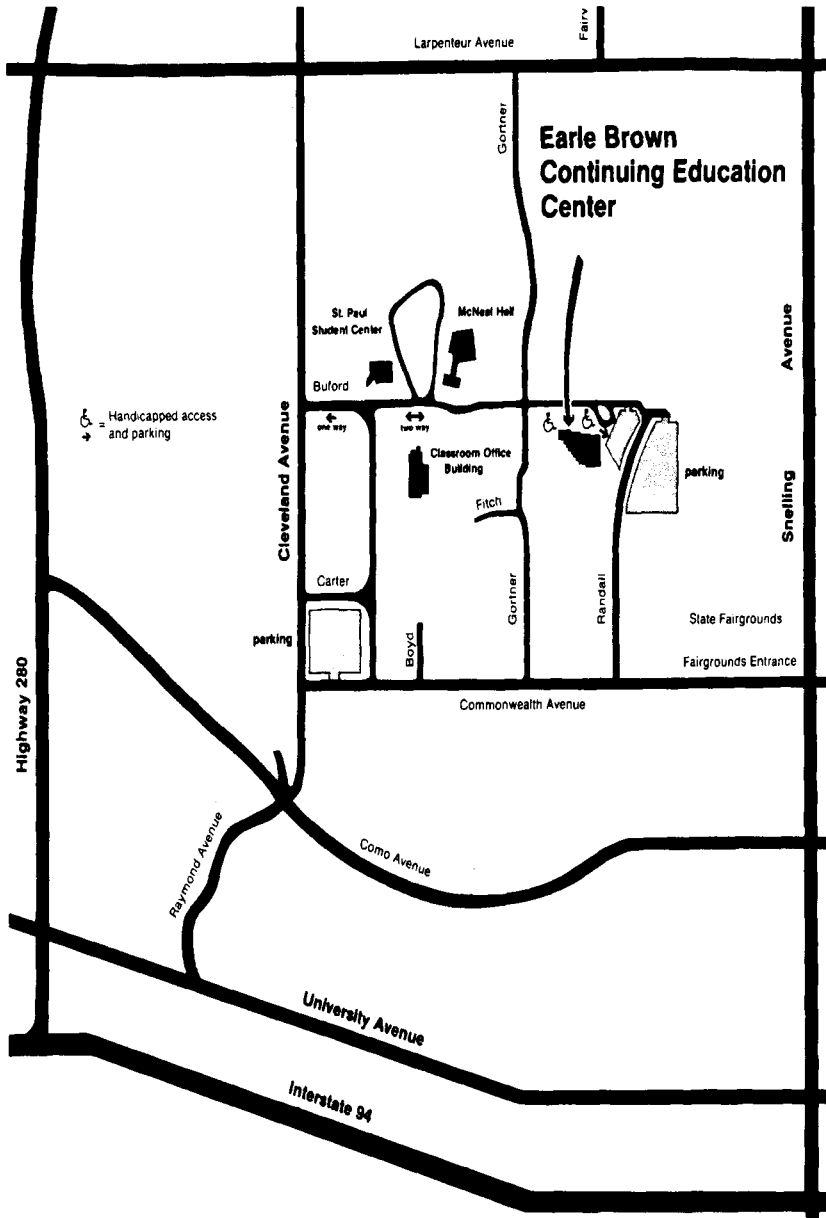


**University of Minnesota  
Twin Cities Campus  
St. Paul**

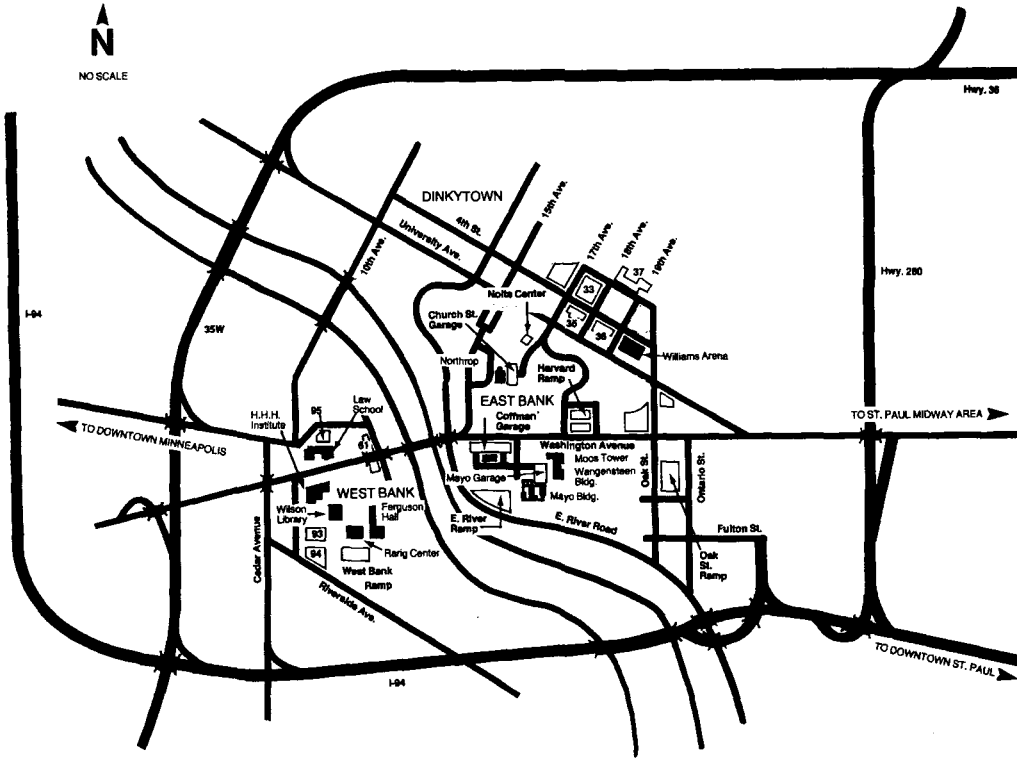


# ACCESS ROUTES TO EARLE BROWN CONTINUING EDUCATION CENTER—ST. PAUL CAMPUS

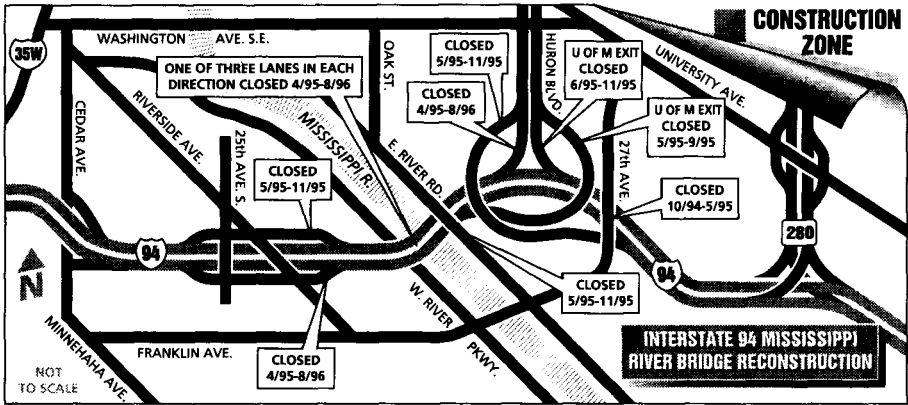
## Parking Map



### MAJOR CAMPUS ACCESS ROUTES

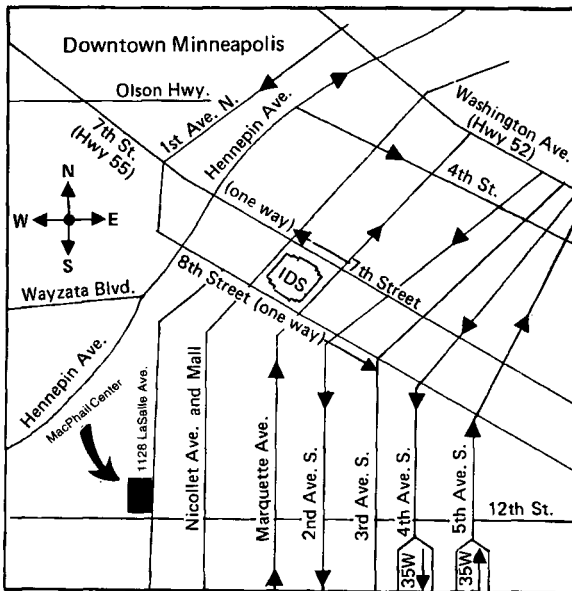


See Parking Facilities on page 486 in this bulletin for information about parking. Highway repairs will limit some access routes to the University during 1995-96.

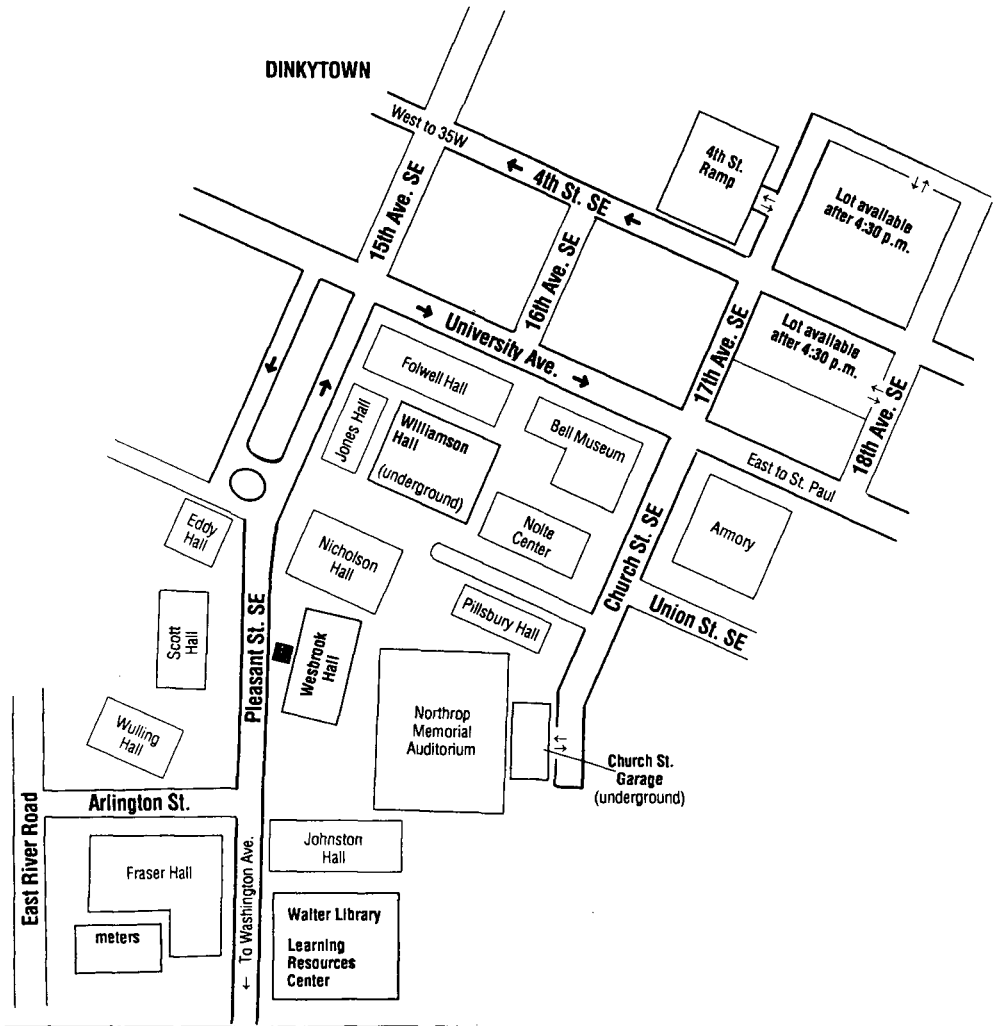


### Construction Map

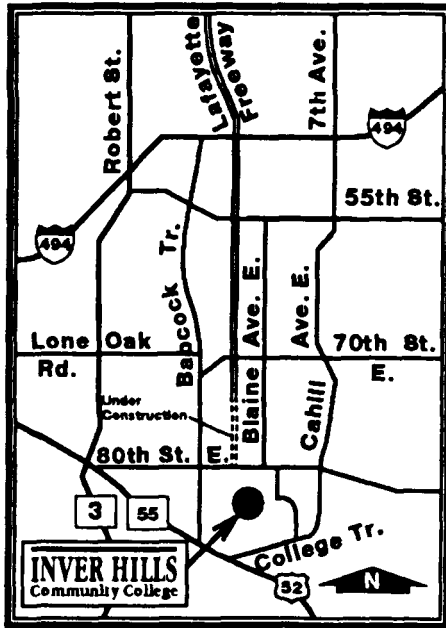
Construction related to repairs on and around Interstate 94 near the University will influence traffic through August 1996. The I-94 bridge over the Mississippi will be limited to two lanes in each direction from April 1995 through August 1996. Closures at different times during the period will affect the U of M I-94 ramps; Riverside Avenue ramps; East River Road bridge; Franklin Terrace; 27th Ave. S.E. bridge; and West River Road Parkway. Motorists traveling to the University should use University Ave S.E. and Washington Ave S.E. if coming from the west (accessible from 35W); University Ave (St. Paul) from the east (accessible from Minn 280); or Como Ave./15th Ave. S.E. from local neighborhoods north of campus.



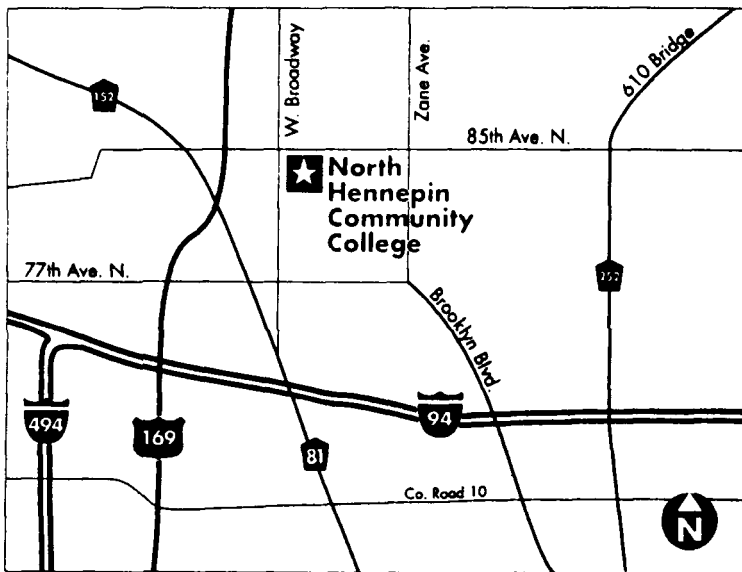
**MacPhail Center**  
**1128 LaSalle Ave., Minneapolis**



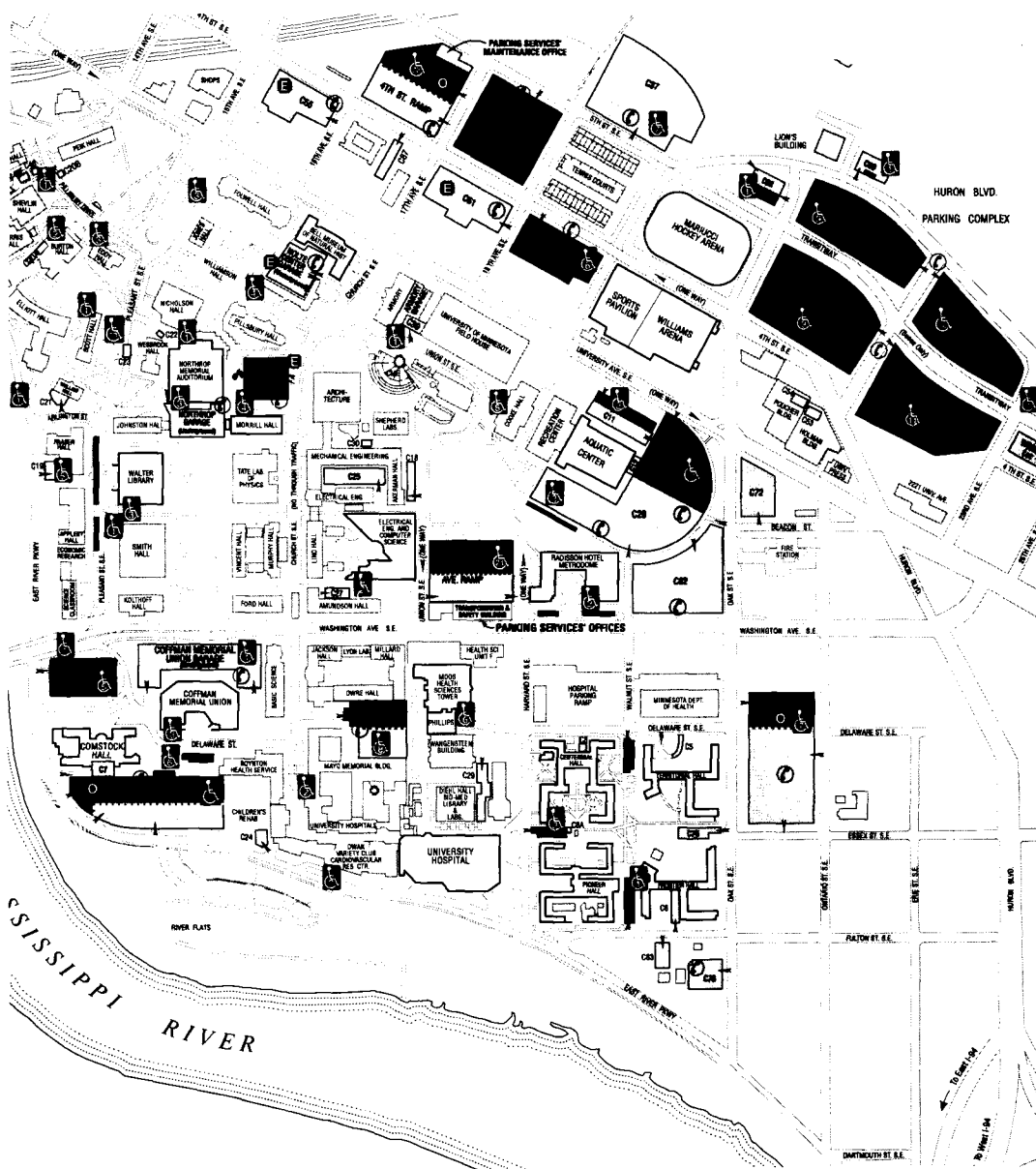
**University of Minnesota  
Twin Cities Campus  
East Bank Campus—  
North End**



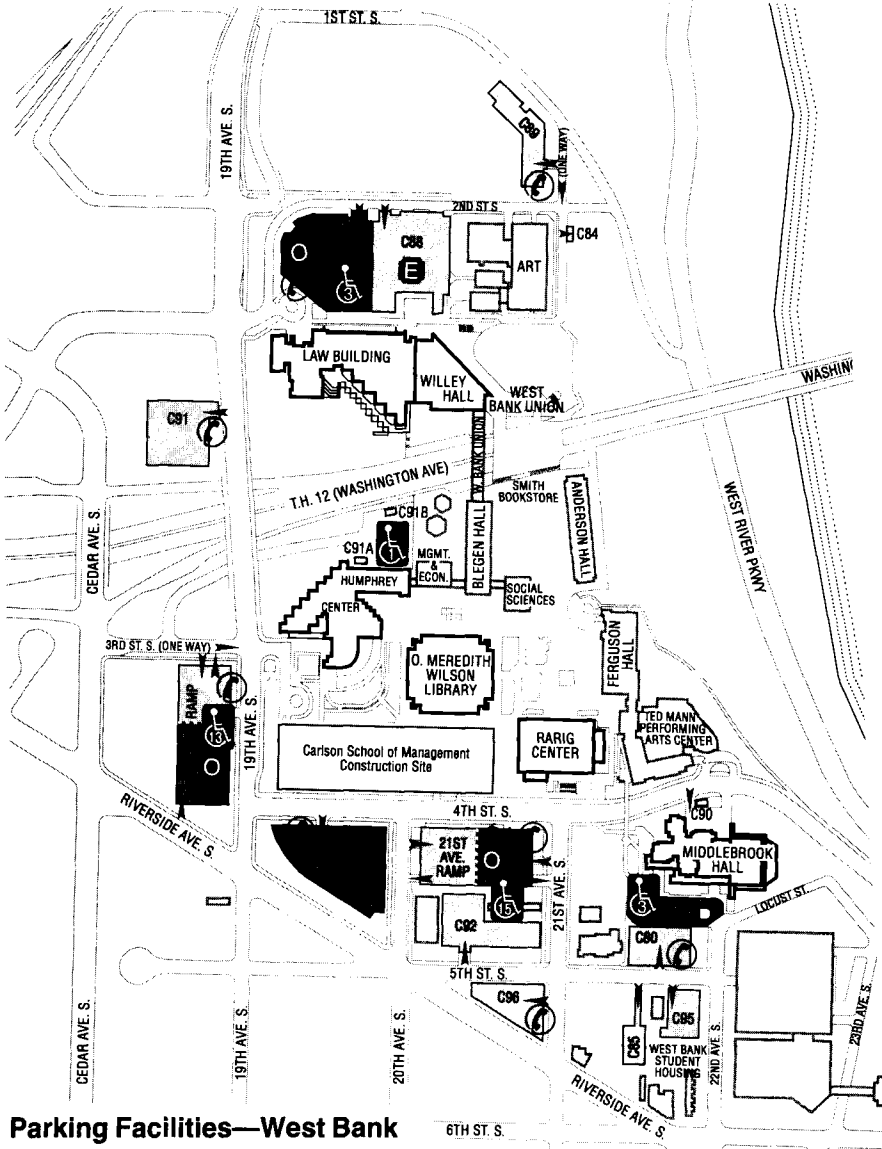
**Inver Hills Community College**  
8445 College Trail, Inver Grove Heights



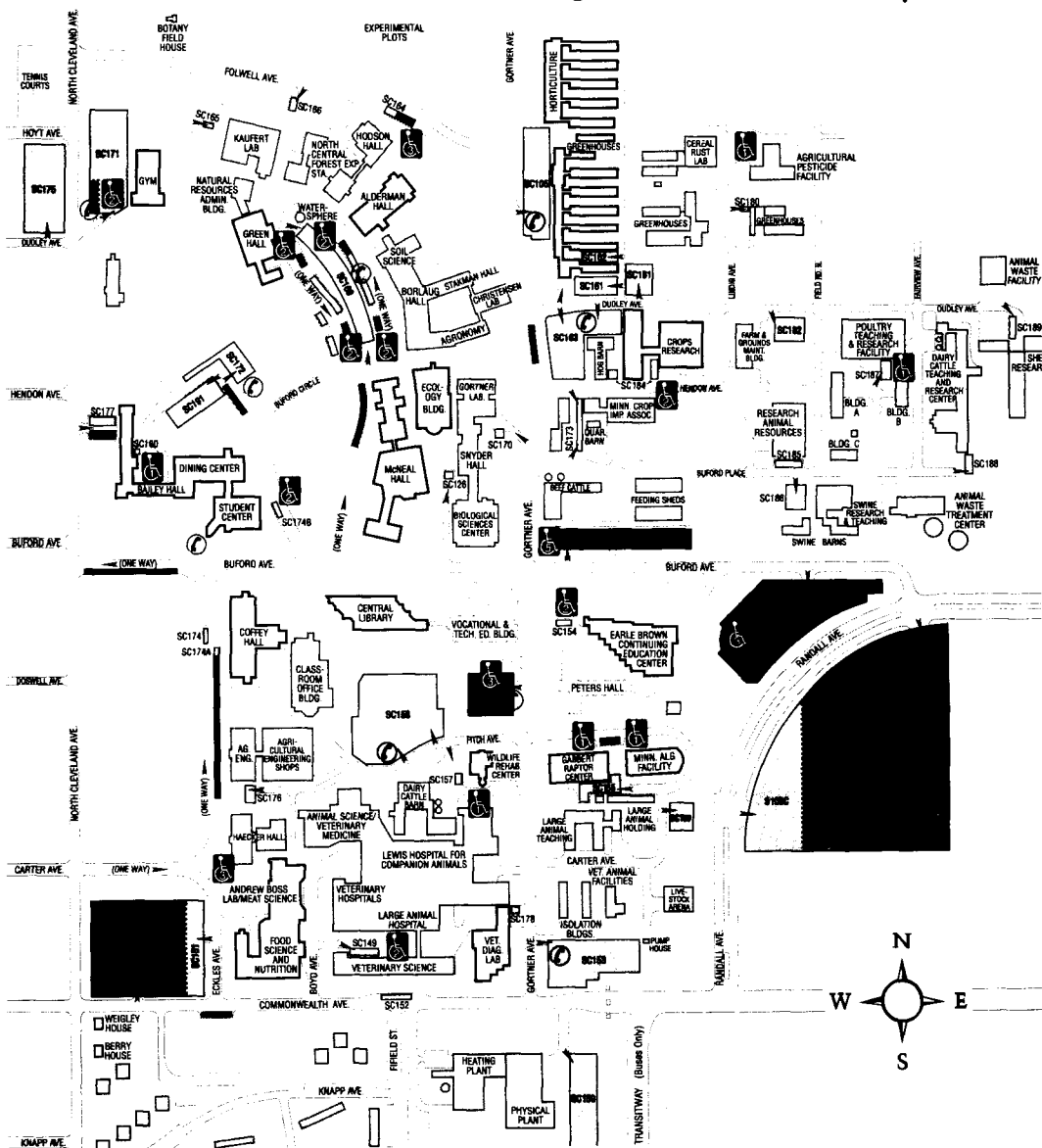
**North Hennepin Community College**  
7411 85th Avenue North, Brooklyn Park



**Parking Facilities—East Bank**



## Parking Facilities—St. Paul Campus





# Off-Campus Classes

## Neighborhood Centers

Courses are listed (by term) below off-campus, neighborhood centers in the Twin Cities area.

Some schools are closed for school functions or holidays; classes will meet on campus when neighborhood centers are closed.

See the maps on page 554.

See the course listings section of this Bulletin (arranged alphabetically by department) for course descriptions. See page 538 for departmental abbreviations.

See page 541 for addresses and abbreviations of neighborhood centers.

See the When and How to Register section of this Bulletin for registration instructions and dates. **Person registrations are not accepted at the neighborhood centers.** Early registration is recommended.

Books for most classes at neighborhood centers are available from the Minnesota Book Center in Williamson Hall on the east bank campus (625-6000) or at the Smith Bookstore on the west bank campus (625-3000). The notice directly under each department heading in the Course Offerings section lists the bookstore that sells books for classes in that department. Be sure to read the Bookstores section of this Bulletin, page 18, for more information.

**Note**—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.

The list below is not all inclusive; other classes meet at special off-campus locations and at the MacPhail Center, downtown Minneapolis. They are described in the *Course Offerings* section.

## Roseville Area High School—West Campus

1261 West Highway 36, Roseville (map on page 554)

### Fall Quarter

|           |                                       |
|-----------|---------------------------------------|
| GC 1111   | Weather and Climate                   |
| Math 1111 | College Algebra and Analytic Geometry |
| Psy 3604  | Abnormal Psychology                   |

### Fall Special Term (15 weeks)

|           |                                 |
|-----------|---------------------------------|
| Econ 1101 | Principles of Economics (Micro) |
|-----------|---------------------------------|

### Winter Quarter

|           |   |
|-----------|---|
| Math 1142 | Short Calculus                                    |
| Math 1251 | One-Variable Differential and Integral Calculus I |
| Psy 1001  | Introduction to Psychology                        |

### Spring Semester

|           |                                 |
|-----------|---------------------------------|
| Econ 1102 | Principles of Economics (Macro) |
|-----------|---------------------------------|

### Spring Quarter

|           |  |
|-----------|--|
| Comp 1011 | Writing Practice                                   |
| Mktg 3000 | Principles of Marketing                            |
| Math 1252 | One Variable Differential and Integral Calculus II |
| Psy 3201  | Introduction to Social Psychology                  |

## Richfield Senior High School

7001 Harriet Avenue S., Richfield (map on page 554)

Classes meet in the north wing of the high school on the east side of the building across from the athletic field and railroad tracks. Enter the parking lot on the Harriet Avenue side. Entrance doors are by the smoke stack.

### Fall Quarter

|           |                                      |
|-----------|--------------------------------------|
| Comp 1011 | Writing Practice                     |
| Mktg 3000 | Principles of Marketing              |
| Math 1031 | College Algebra and Probability      |
| Math 1251 | One Variable and Integral Calculus I |
| Psy 1001  | Introduction to Psychology           |

### Fall Special Term (15 weeks)

|           |                                 |
|-----------|---------------------------------|
| Econ 1101 | Principles of Economics (Micro) |
|-----------|---------------------------------|

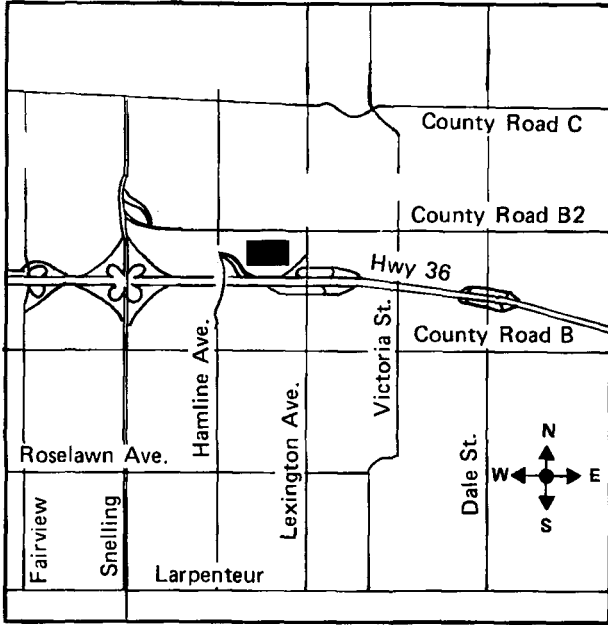
### Winter Quarter

|           |       |
|-----------|-------|
| Phil 1001 | Logic |
|-----------|-------|

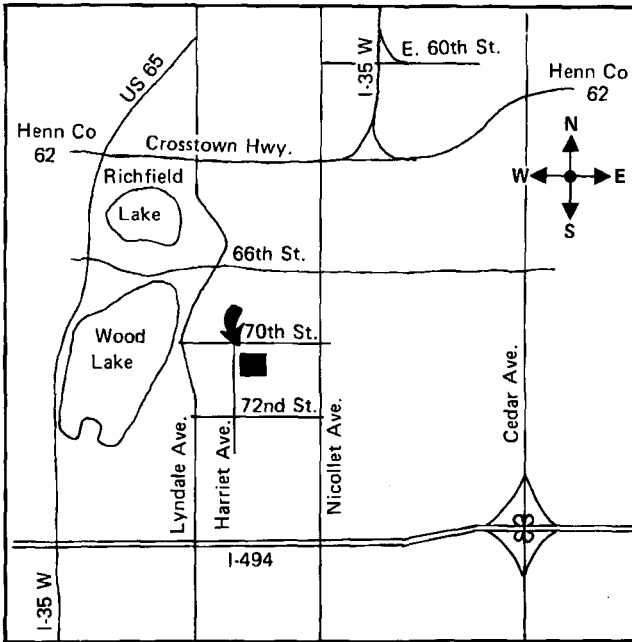
### Spring Quarter

|          |                     |
|----------|---------------------|
| Psy 3604 | Abnormal Psychology |
|----------|---------------------|

Off-Campus Classes



**Roseville Area High School**  
**1261 W. Highway 36, Roseville**



**Richfield High School**  
**7001 Harriet Ave. S., Richfield**  
(Classes meet in north wing, east side of building;  
enter doors by the smoke stack.)

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600 E. Fourth Street  
Morris, MN 56267  
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Minneapolis, MN 55455  
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**TO:** All Employees and Students of the University of Minnesota

**FROM:** President Nils Hasselmo

**RE: DRUG-FREE CAMPUS AND WORK PLACE COMPLIANCE**

Federal laws<sup>1</sup> require the University of Minnesota to carry out a program to prevent the unlawful possession, use, or distribution of illegal drugs and abuse of alcohol by its students. The University's failure to comply with these laws may make the University and its students ineligible to receive federal funds or any form of financial assistance under any federal program, including student loans.

This memo outlines the University's compliance. All students of the University are expected to abide by the conditions outlined here.

### **PROHIBITED ACTIONS**

Drug and alcohol abuse affects the health, safety, and well-being of all students and restricts the University's ability to carry out its mission. Therefore, the University of Minnesota:

1. Prohibits the unlawful possession, use, or distribution of alcohol and illicit drugs by students on all campuses and at all facilities of the University or as part of the University's activities; and
2. Prohibits the unlawful manufacture, distribution, dispensation, possession, or use of controlled substances in the work place.

### **SANCTIONS**

**Students** who violate the prohibition against illicit drugs and alcohol are subject to discipline. Item 11 of the student conduct code states:

When the violation of a federal or state law, including but not limited to those governing alcoholic beverages, drugs, gambling, sex offenses, indecent conduct, or arson, occurs on campus, the offense will also constitute an offense against the University.

Potential sanctions for violation include: (1) warning and admonition; (2) required compliance; (3) confiscation of illicit drugs or alcohol; (4) probation; and (5) suspension or expulsion. Sanctions also may include required completion of an appropriate treatment or rehabilitation program. Sanctions will reflect the particular violation and its severity. Referral for criminal prosecution may occur, where appropriate. More detailed information on procedures and sanctions can be found in *A Statement of Standards of Student Conduct Enforceable by University Agencies*.

In addition, housing handbooks for each campus describe policies and disciplinary procedures for violations that occur in University housing. Residents violating alcohol or drug policies will be referred for disciplinary action. Depending on the circumstances of the violation, disciplinary action may include, but not be limited to: warning, resident hall fine, referral to the University Counseling Center, restriction of privileges, community service, probation, or expulsion.

Students must be aware that there are significant criminal penalties, under state and federal law, for the unlawful possession or distribution of alcohol and illicit drugs. Penalties include prison terms, property forfeiture, and fines.

Details of relevant state and federal laws and their penalties are enclosed with this memo.

### **EDUCATIONAL AND TREATMENT PROGRAMS**

Services for students include: diagnosis and assessment, short-term counseling, referral, and support groups. Consultation also is available for supervisors whose staff members may have alcohol- and/or drug-related problems.

*Federal law requires that any information obtained from clients or patients by doctors, psychologists, or drug-treatment centers remain confidential. This makes it possible for people to receive help for drug problems without getting into trouble with the law.*

Counseling and assistance for **students** with drug or alcohol problems is available at the following locations:

**Twin Cities:** Boynton Health Service, (612) 624-1940

**Duluth:** Student Health and Counseling Center, (218) 726-8155

**Morris:** Counseling Services, (612) 589-2211 ext. 6060

**Crookston:** Residential Life Office, (218) 281-6510 ext. 352

Students who live in residence halls also can contact residence-hall staff for help and information.

Student health insurance covers some types of assistance. Private health insurance may provide similar or additional coverage.

Educational programs for students include: educational fairs, lectures, awareness campaigns, classes for DWI offenders, residence-hall programs, and an alcohol/drug resource center.

**Federal Penalties and Sanctions for Illegal Possession of a Controlled Substance**

*21 U.S.C. 844(a)*

First conviction: Up to one year imprisonment and fined at least \$1,000 but not more than \$100,000 or both.

After one prior drug conviction: At least 15 days in prison, not to exceed 2 years and fined at least \$2,500 but not more than \$250,000 or both.

After 2 or more prior drug convictions: At least 90 days in prison, not to exceed 3 years and fined at least \$5,000 but not more than \$250,000 or both.

Special sentencing provisions for possession of crack cocaine: Mandatory at least five years in prison, not to exceed 20 years and fined up to \$250,000 or both, if:

- (a) First conviction and the amount of crack possessed exceeds five grams
- (b) Second crack conviction and the amount of crack possessed exceeds three grams.
- (c) Third or subsequent crack conviction and the amount of crack possessed exceeds one (c) gram.

*21 U.S.C. 853(a)(2) and 881(a)(7)*

Forfeiture of personal and real property used to possess or to facilitate possession of a controlled substance if that offense is punishable by more than one year imprisonment. (See special sentencing provisions re: crack.)

*21 U.S.C. 881(a)(4)*

Forfeiture of vehicles, boats, aircraft or any other conveyance used to transport or conceal a controlled substance.

*21 U.S.C. 844a*

Civil fine of up to \$10,000 (pending adoption of final regulations).

*21 U.S.C. 853a*

Denial of Federal benefits, such as student loans, grants, contracts, and professional and commercial licenses up to one year for first offense, up to five years for second and subsequent offenses.

*18 U.S.C. 922(g)*

Ineligible to receive or purchase a firearm.

**Miscellaneous**

Revocation of certain Federal licenses and benefits, e.g. pilot licenses, public housing tenancy, etc., are vested within the authorities of individual Federal agencies.

**Effects of Alcohol**

Alcohol consumption causes a number of marked changes in behavior. Even low doses significantly impair the judgement and coordination required to drive a car safely, increasing the likelihood that the driver will be involved in an accident. Low to moderate doses of alcohol also increase the incidence of a variety of aggressive acts, including spouse and child abuse. Moderate to high doses of alcohol cause marked impairments in higher mental functions, severely altering a

person's ability to learn and remember information. Very high doses cause respiratory depression and death. If combined with other depressants of the central nervous system, much lower doses of alcohol will produce the effects just described.

Repeated use of alcohol can lead to dependence. Sudden cessation of alcohol intake is likely to produce withdrawal symptoms, including severe anxiety, tremors, hallucinations, and convulsions. Alcohol withdrawal can be life threatening. Long-term consumption of large quantities of alcohol, particularly when combined with poor nutrition can also lead to permanent damage to vital organs such as the brain and liver.

Mothers who drink alcohol during pregnancy may give birth to infants with fetal alcohol syndrome. These infants have irreversible physical abnormalities and mental retardation. In addition, research indicates that children of alcoholic parents are a greater risk than other youngsters of becoming alcoholics.

Federal Register/Vol. 55, No. 159/Thursday, August 16, 1990/Rules and Regulations, pp. 33588-33591

<sup>1</sup>The Drug-Free Schools and Communities Act Amendments of 1989 and the Drug-Free Work Place Act of 1989.

## Federal Trafficking Penalties

| CSA   | Penalty   |   | Drug   | Quantity  |   |  |
|---|---|---|--|---|---|--|
|   | First Offense   | Second Offense  |  |   |   |  |
| I<br>and<br>II  | Not less than 5 years. Not more than 40 years.                                    | Not less than 10 years.<br>Not more than life.                                    | METHAMPHETAMINE  | 10-99 gm or 100-999 gm mixture                      |   |  |
|   |   |   | HEROIN   | 100-999 gm mixture                                  |   |  |
|   |   |   | COCAINE  | 500-4,999 gm mixture                                |   |  |
|   | If death or serious injury, not less than 20 years. Not more than life.           | If death or serious injury, not less than life.                                   | CONCAINE BASE  | 5-49 gm mixture                                     |   |  |
|   |   |   | PCP  | 10-99 gm or 100-999 gm mixture                      |   |  |
|   |   |   | LSA  | 1-10 gm mixture                                     |   |  |
|   | Fine of not more than \$2 million individual, \$5 million other than individual.  | Fine of not more than \$4 million individual, \$10 million other than individual. | FENTANYL   | 40-399 gm mixture                                   |   |  |
|   |   |   | FENTANYL ANALOGUE  | 10-99 gm mixture                                    |   |  |
|   |   |   | METHAMPHETAMINE  | 100 gm or more or 1 kg <sup>1</sup> or more mixture |   |  |
|   |   |   | HEROIN   | 1 kg or more mixture                                |   |  |
| Not less than 10 years. Not more than life.                                       | Not less than 20 years, not more than life.                                       | COCAINE   | 5 kg or more mixture   |   |   |  |
|   |   | COCAINE BASE  | 50 gm or more mixture  |   |   |  |
|   |   | PCP   | 100 gm or more or 1 kg or more mixture   |   |   |  |
| If death or serious injury, not less than 20 years. Not more than life.           | If death or serious injury, not less than life.                                   | LSA   | 10 gm or more mixture  |   |   |  |
|   |   | FENTANYL  | 400 gm or more mixture   |   |   |  |
|   |   | FENTANYL ANALOGUE   | 100 gm or more mixture   |   |   |  |
|   |   | PCP   | 100 gm or more or 1 kg or more mixture   |   |   |  |
| Fine of not more than \$4 million individual, \$10 million other than individual. | Fine of not more than \$8 million individual, \$20 million other than individual. | LSA   | 10 gm or more mixture  |   |   |  |
|   |   | FENTANYL  | 400 gm or more mixture   |   |   |  |
|   |   |   |  |   |   |  |
|   | <b>Drug</b>   | <b>Quantity</b>   | <b>First Offense</b>   |   | <b>Second Offense</b>   |  |
|   | Others <sup>2</sup>   | Any   | Not more than 20 years. If death or serious injury, not less than 20 years, not more than life. Fine \$1 million individual, \$5 million not individual. |   | Not more than 30 years. If death or serious injury, life. Fine \$2 million individual, \$10 million not individual. |  |
| III   | All   | Any   | Not more than 5 years. Fine not more than \$250,000 individual, \$1 million not individual.  |   | Not more than 10 years. Fine not more than \$500,000 individual, \$2 million not individual.                        |  |
| IV  | All   | Any   | Not more than 3 years. Fine not more than \$250,000 individual, \$1 million not individual.  |   | Not more than 6 years. Fine not more than \$500,000 individual, \$2 million not individual.                         |  |
| V   | All   | Any   | Not more than 1 year. Fine not more than \$100,000 individual, \$250,000 not individual.   |   | Not more than 2 years. Fine not more than \$200,000 individual, \$500,000 not individual.                           |  |

<sup>1</sup>Law as originally enacted states 100 gm. Congress requested to make technical correction to 1 kg.

<sup>2</sup>Does not include marijuana, hashish, or hash oil. (See separate chart.)



## Federal Trafficking Penalties—Marijuana

As of November 18, 1988

| Quantity                                     | Description   | First Offense  | Second Offense   |
|--|---|--|--|
| 1,000 kg or more; or<br>1,000 or more plants | MARIJUANA<br>Mixture containing<br>detectable quantity* | Not less than 10 years, not more than life. If death or serious injury, not less than 20 years, not more than life. Fine not more than \$4 million individual, \$10 million other than individual.   | Not less than 20 years, not more than life. If death or serious injury, not less than life. Fine not more than \$8 million individual, \$20 million other than individual. |
| 100 kg to 1,000 kg;<br>or 100-999 plants     | MARIJUANA<br>Mixture containing<br>detectable quantity* | Not less than 5 years, not more than 40 years. If death or serious injury, not less than 20 years, not more than life. Fine not more than \$2 million individual, \$5 million other than individual. | Not less than 10 years, not more than life. If death or serious injury, not less than life. Fine not more than \$4 million individual, \$10 million other than individual. |
| 50 to 100 kg or<br>50-99 plants              | MARIJUANA   | Not more than 20 years. If death or serious injury, not less than 20 years, not more than life.  | Not more than 30 years. If death or serious injury, life.  |
| 10-100 kg                                    | HASHISH   | Fine \$1 million individual, \$5 million other than individual.  | Fine \$2 million individual, \$10 million other than individual.   |
| 1 to 100 kg                                  | HASHISH OIL   |  |  |
| Less than 50 kg                              | MARIJUANA   | Not more than 5 years.   | Not more than 10 years.  |
| Less than 10 kg                              | HASHISH   | Fine not more than \$250,000 individual, \$1 million other than individual.  | Fine \$500,000 individual, \$2 million other than individual.  |
| Less than 1 kg                               | HASHISH OIL   |  |  |

\*Includes Hashish and Hashish Oil

(Marijuana is a Schedule I Controlled Substance)

## Controlled Substances—Uses and Effects

| Drugs                  | CSA Schedules     | Trade or Other Names  | Medical Uses                                    | Dependence |               | Tolerance | Duration (hours) | Usual Methods of Administration | Possible Effects                 | Effects of Overdose             | Withdrawal Syndrome                      |
|------------------------|-------------------|---|---|------------|---------------|-----------|------------------|---------------------------------|----------------------------------|---------------------------------|--|
|                        |                   |   |   | Physical   | Psychological |           |                  |                                 |                                  |                                 |  |
| <b>NARCOTICS</b>       |                   |   |   |            |               |           |                  |                                 |                                  |                                 |  |
| Opium                  | II, III, V        | Dover's Powder, Paregoric, Parepectolin   | Analgesic, antidiarrheal                        | High       | High          | Yes       | 3-6              | Oral, smoked                    | Euphoria,                        | Slow and shallow breathing,     | Watery eyes,                             |
| Morphine               | II, III           | Morphine, MS-Contin, Roxanol, Roxanol-SR  | Analgesic, antitussive                          | High       | High          | Yes       | 3-6              | Oral, smoked, injected          | drowsiness,                      | clammy skin, convulsions, coma, | runny nose,                              |
| Codeine                | II, III, V        | Tylenol w/Codeine, Empirin w/Codeine, Robitussin A-C, Fiorinal w/Codeine  | Analgesic, antitussive                          | Moderate   | Moderate      | Yes       | 3-6              | Oral, injected                  | respiratory depression,          | possible death                  | yawning, loss of appetite, irritability, |
| Heroin                 | I                 | Diacetylmorphine, Horse, Smack  | None  | High       | High          | Yes       | 3-6              | Injected, sniffed, smoked       | constricted pupils,              |                                 | tremors, panic                           |
| Hydromorphone          | II                | Dialaudid   | Analgesic                                       | High       | High          | Yes       | 3-6              | Oral, injected                  | nausea                           |                                 | cramps, nausea, chills and sweating      |
| Meperidine (Pethidine) | II                | Demerol, Mepergan   | Analgesic                                       | High       | High          | Yes       | 3-6              | Oral, injected                  |                                  |                                 |  |
| Methadone              | II                | Dolophine, Methadone, Methadose   | Analgesic                                       | High       | High-Low      | Yes       | 12-24            | Oral, injected                  |                                  |                                 |  |
| Other Narcotics        | I, II, III, IV, V | Numorphan, Percodan, Percocet, Tylox, Tussionex, Fentanyl, Darvon, Lomotil, Talwin <sup>2</sup>                   | Analgesic, antidiarrheal, antitussive           | High-Low   | High-Low      | Yes       | Variable         | Oral, injected                  |                                  |                                 |  |
| <b>DEPRESSANTS</b>     |                   |   |   |            |               |           |                  |                                 |                                  |                                 |  |
| Chloral Hydrate        | IV                | Noctec  | Hypnotic  | Moderate   | Moderate      | Yes       | 5-8              | Oral                            | Slurred speech,                  | Shallow respiration,            | Anxiety, insomnia                        |
| Barbiturates           | II, III, IV       | Amytal, Butisol, Fiorinal, Lotusate, Nembutal, Seconal, Tuinal, Phenobarbital                                     | Anesthetic, hypnotic, anticonvulsant, sedative  | High-Mod   | High-Mod      | Yes       | 1-16             | Oral                            | disorientation, drunken behavior | clammy skin, dilated pupils,    | tremors, delirium, convulsions.          |
| Benzodiazepines        | IV                | Ativan, Dalmane, Diazepam, Librium, Xanax, Serax, Valium, Tranxexa, Verstran, Versed, Halcion, Paxipam, Flestoril | Antianxiety, sedative, anticonvulsant, hypnotic | Low        | Low           | Yes       | 4-8              | Oral                            | without odor of alcohol          | weak and rapid pulse, coma,     | possible death                           |
| Methaqualone           | I                 | Quaalude  | Sedative, hypnotic                              | High       | High          | Yes       | 4-8              | Oral                            |                                  | possible death                  |  |
| Glutethimide           | III               | Doriden   | Sedative, hypnotic                              | High       | Moderate      | Yes       | 4-8              | Oral                            |                                  |                                 |  |
| Other Depressants      | III, IV           | Equanil, Miltown, Noludar, Placidyl, Vaimid   | Antianxiety, sedative, hypnotic                 | Moderate   | Moderate      | Yes       | 4-8              | Oral                            |                                  |                                 |  |

<sup>1</sup> Designated a narcotic under the CSA<sup>2</sup> Not designated a narcotic by the CSA

## Controlled Substances—Uses and Effects

| Drugs                   | CSA Schedules | Trade or Other Names  | Medical Uses                                     | Dependence |               | Tolerance | Duration (hours) | Usual Methods of Administration | Possible Effects  | Effects of Overdose  | Withdrawal Syndrome  |
|-------------------------|---------------|---|--|------------|---------------|-----------|------------------|---------------------------------|---|--|--|
|                         |               |   |  | Physical   | Psychological |           |                  |                                 |   |  |  |
| <b>STIMULANTS</b>       |               |   |  |            |               |           |                  |                                 |   |  |  |
| Cocaine                 | II            | Coke, Flake, Snow, Crack  | Local anesthetic                                 | Possible   | High          | Yes       | 1-2              | Sniffed, smoked, injected       | increases alertness, excitation, euphoria, increased pulse rate and blood pressure, insomnia, | Agitation, Increase in body temperature, hallucinations, convulsions, possible death | Apathy long periods of sleep, irritability, depression, disorientation |
| Amphetamines            | II            | Biphetamine, Delcobase, Desoxyn, Dexedrine, Obetrol                                   | Attention deficiency, narcolepsy, weight control | Possible   | High          | Yes       | 2-4              | Oral, injected                  |   |  |  |
| Phenmetrazine           | II            | Preludin  | Weight control                                   | Possible   | High          | Yes       | 2-4              | Oral, injected                  |   |  |  |
| Methylphenidate         | II            | Ritalin   | Attention deficiency, narcolepsy                 | Possible   | Moderate      | Yes       | 2-4              | Oral, injected                  |   |  |  |
| Other Stimulants        | III, IV       | Adipex, Cylert, Didrex, Ionamin, Moffiat, Plegine, Sancrex, Tenuate, Tepanil, Prelu-2 | Weight control                                   | Possible   | High          | Yes       | 2-4              | Oral, injected                  | loss of appetite  |  |  |
| <b>HALLUCINOGENS</b>    |               |   |  |            |               |           |                  |                                 |   |  |  |
| LSD                     | I             | Acid, Microdot  | None   | None       | Unknown       | Yes       | 8-12             | Oral                            | illusions and hallucinations, poor perception of time and distance                            | Longer, more intense "trip" episodes, psychosis, possible death                      | Withdrawal syndrome not reported                                       |
| Mescaline and Peyote    | I             | Mexc, Buttons, Cactus   | None   | None       | Unknown       | Yes       | 8-12             | Oral                            |   |  |  |
| Amphetamine Variants    | I             | 2,5-DMA; PMA; STP; MDA; MDMA; TMA; DOM, DOB   | None   | Unknown    | Unknown       | Yes       | Variable         | Oral, injected                  |   |  |  |
| Phencyclidine           | II            | PCP, Angel Dust, Hog  | None   | Unknown    | High          | Yes       | Days             | Smoked, oral, injected          |   |  |  |
| Phencyclidine Analogues | I             | PCE, PCPy, TCP  | None   | Unknown    | High          | Yes       | Days             | Smoked, oral, injected          |   |  |  |
| Other Hallucinogens     | I             | Bufotenine, Ibogaine, DMT, DET, Psilocybin, Psilocin                                  | None   | None       | Unknown       | Possible  | Variable         | Smoked, oral, injected sniffed  |   |  |  |
| <b>CANNABIS</b>         |               |   |  |            |               |           |                  |                                 |   |  |  |
| Marijuana               | I             | Pot, AcapulcoGold, Grass, Reefer, Sinsemilla, Thai Sticks                             | None   | Unknown    | Moderate      | Yes       | 2-4              | Smoked, oral                    | Euphoria, relaxed inhibitions, increased appetite, disoriented behavior                       | Fatigue, paranoia possible psychosis   | Occasional insomnia, hyperactivity, decreased appetite                 |
| Tetrahydrocannabinol    | I, II         | THC, Marinol  | Cancer chemotherapy antinauseant                 | Unknown    | Moderate      | Yes       | 2-4              | Smoked, oral                    |   |  |  |
| Hashish                 |               | Hash  | None   | Unknown    | Moderate      | Yes       | 2-4              | Smoked, oral                    |   |  |  |
| Hashish Oil             | I             | Hash Oil  | None   | Unknown    | Moderate      | Yes       | 2-4              | Smoked, oral                    |   |  |  |

<sup>1</sup> Designated a narcotic under the CSA

<sup>2</sup> Not designated a narcotic by the CSA

## MINNESOTA CRIMES AND PENALTIES—DRUGS

| Sale  | Possession  | Penalty <sup>1</sup>   |
|---|---|--|
| 10 grams crack, 50 grams/200 doses cocaine/narcotic/heroin/methamphetamine/hallucinogen, 50 kilos marijuana   | 25 grams crack, 500 grams/500 doses cocaine/heroin/methamphetamine/hallucinogen, 100 kilos marijuana  | 0-30 years imprisonment, 4 year mandatory minimum if prior drug felony; up to \$1 million fine       |
| 3 grams crack, 10 grams/50 doses cocaine/narcotic/heroin/methamphetamine/hallucinogen, 25 kilos marijuana, or sale of any schedule I or II narcotic drug to a minor or in a school or park zone | 6 grams crack, 50 grams/100 doses cocaine/heroin/methamphetamine/hallucinogen, 50 kilos marijuana   | 0-25 years imprisonment, 3 year minimum if prior drug felony; up to \$500,000 fine                   |
| crack/cocaine/narcotic/heroin, 5 kilos marijuana, or sale of any schedule I, II, or III drug (except aschedule I or II narcotic drug to a minor or employment of a minor to sell same)          | 3 grams crack, 10 grams/50 doses cocaine/narcotic/heroin/methamphetamine, 10 kilos marijuana, any amount of a schedule I or II narcotic drug in a school or park zone, or with intent to sell | 0-20 years imprisonment, 2 year mandatory minimum if prior drug felony; up to \$250,000 fine         |
| Any schedule I, II, or III drug (except marijuana) or sale of any schedule IV or V drug to a minor  | 10 doses hallucinogen, schedule I, II, or III (except marijuana with intent to sell)  | 0-15 years imprisonment, 1 year mandatory minimum if prior drug felony; up to \$100,000 fine         |
| Marijuana, or any schedule IV drug  | All schedule I, II, III or IV drugs except 1.5 oz. (42.5 grams) or less of marijuana  | 0-5 years imprisonment, up to \$10,000 fine; fine or 6 months mandatory minimum if prior drug felony |
| Drug-related offenses also include failure to purchase drug tax stamps, money laundering and racketeering, with a potential fine of three times gross profits.                                  | Possession of up to 1.5 oz. marijuana   | Fine up to \$200 and required attendance at an approved drug education program                       |
|   | Second conviction of above within 2 years or failure to comply with sanctions above   | Misdemeanor—drug treatment may be required   |
|   | Possession of more than 1.4 grams of marijuana in automobile  | Misdemeanor  |

<sup>1</sup>Penalties can change with each legislative session.

## MINNESOTA CRIMES AND PENALTIES—ALCOHOL

| Crime   | Penalty  |
|---|--|
| It is illegal to drive, operate, or be in physical control of a motor vehicle while under the influence of alcohol and/or a controlled or hazardous substance, or with an "alcohol concentration" of 0.10 or more. Motor vehicles include cars, boats, snowmobiles, ATVs, planes, etc. "Operate" or "in physical control" includes starting the motor, steering, or being in position to control a vehicle, including simply sitting or sleeping in a parked vehicle. | First offense (including juvenile convictions): misdemeanor—fine up to \$700, jail up to 90 days, driver's license revocation of at least 30 days. Second offense within 5 years or 2 or more convictions within 10 years: gross misdemeanor—fine up to \$3,000, jail up to 1 year, driver's license revocation of at least 30-90 days and possible chemical dependency treatment. Third or more offenses; longer periods of revocation. |
| Anyone under 21 years consuming or possessing alcoholic beverages with intent to consume, unless the person is in a parent or guardian's home and drinks with their permission. Possession anywhere other than a parent or guardian's home is prima facie evidence of intent to consume.  | Misdemeanor  |
| Selling, bartering, furnishing or giving alcoholic beverages to a person under 21 years old (except parents in their home).   | Gross misdemeanor. Possible civil liability for damages caused by the person under 21 while under the influence.   |
| Anyone under 21 years purchasing or attempting to purchase an alcoholic beverage, or claiming to be 21 or older for the purpose of purchasing alcoholic beverages.  | Misdemeanor. Driver's license suspension of 90 days if a driver's license, permit, or MN identification is used in making or attempting the purchase.  |
| Inducing a person under 21 years to purchase or procure alcoholic beverages or lending to or permitting use of identification by a person under the age of 21 for the purpose of purchasing or attempting to purchase alcoholic beverages.  | Gross misdemeanor. Driver's license suspension of 90 days if a driver's license is lent.   |

|  |                              |
|--|------------------------------|
| <b>A</b>   |                              |
| Abbreviations .....  | 538, 540                     |
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# 1995-96 Calendar

## AUGUST 1995

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

## SEPTEMBER 1995

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

## OCTOBER 1995

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

## NOVEMBER 1995

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

## 1996

### DECEMBER 1995

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

### JANUARY 1996

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

# 1996 Calendar

## FEBRUARY 1996

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

## MARCH 1996

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

## APRIL 1996

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

## MAY 1996

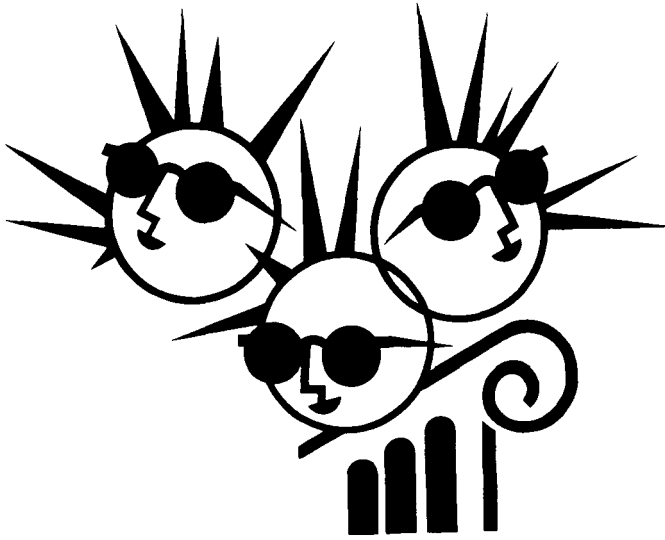
| S  | M  | T  | W  | T  | F  | S  |
|----|----|----|----|----|----|----|
|    |    |    | 1  | 2  | 3  | 4  |
| 5  | 6  | 7  | 8  | 9  | 10 | 11 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | 30 | 31 |    |

## JUNE 1996

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

## JULY 1996

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



1996

## **Make Summertime a Learning Time**

**M***ake a few summer evenings a time for learning next year. Sharpen job skills, work toward a degree, or explore a new interest through summer evening Extension classes. More than 200 classes are planned for degree credit or no credit.*

*Call 624-2388 to request a summer evening bulletin if you do not receive one by April 15.*

### **Terms (tentative)**

First 5-week term ..... June 10 to July 16

Second 5-week term ..... July 18 to August 21

10-week term ..... June 10 to August 21

### **Registration dates (tentative)**

By mail ..... Beginning May 1

In person. .... Beginning May 13



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University of Minnesota  
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